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ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
L14
ΑN
    2007:1022145 CAPLUS Full-text
DN
    147:365513
    Preparation of pyrazolo[1,5-a]pyrimidines as agricultural fungicides
ΤI
    Dietz, Jochen; Grote, Thomas; Grammenos, Wassilios; Mueller, Bernd;
IN
    Lohmann, Jan Klaas; Renner, Jens; Ulmschneider, Sarah
PA
    BASF Aktiengesellschaft, Germany
    PCT Int. Appl., 150pp.
SO
    CODEN: PIXXD2
DT
    Patent
    German
LA
FAN.CNT 1
    PATENT NO.
                        KIND
                               DATE
                                           APPLICATION NO.
                                                                  DATE
                                           ______
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                        ____
                               _____
                               20070913
                                          WO 2007-EP52104
                                                                  20070306
РΤ
    WO 2007101859
                         A 1
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN,
            KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN,
            MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
            RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
            UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
            GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
            BY, KG, KZ, MD, RU, TJ, TM
PRAI EP 2006-110739
                         Α
                               20060307
    EP 2006-111155
                         Α
                               20060315
    MARPAT 147:365513
OS
GΙ
           NR1R2
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AΒ The title compds. [I; R1 = H, (halo)alkyl, (halo)alkenyl, (halo)alkynyl, (halo)cycloalkyl, (halo)cycloalkenyl, (halo)alkoxy, alkenyloxy, alkynyloxy, cycloalkoxy, amino, alkylamino, dialkylamino, Ph, naphthyl 5-6 membered (saturated) aromatic heterocyclyl containing 1-4 heteroatoms selected from O, N and S; R2 = CR6R7(CR8R9)q(CR10R11)pYZ; R6-R11 = H, (halo)alkyl, (halo)alkenyl, (halo)alkynyl, (halo)cycloalkyl, (halo)cycloalkenyl, etc.; Y = S, O; Z = H, CO2H, CHO, alkyl, (halo)alkyl, (halo)alkynyl, etc. q = 0, 1; p =0-5; R3, R4 = H, halo, cyano, NO2, (halo)alkyl, (halo)alkenyl, (halo)alkynyl, hydroxyalkyl, alkoxyalkyl, (halo)cycloalkyl, (halo)alkoxy, alkylthio, alkylsulfynyl, alkylsulfonyl, CHO, thiocarbamoyl, alkylcarbonyl, alkoxycarbonyl, alkylaminocarbonyl, alkoxyiminocarbonyl, hydroxyiminoalkyl, etc.; X = H, cyano, (halo)alkyl, (halo)alkoxy; R5 = 5-6 membered (saturated) aromatic (substituted) heterocyclyl containing 1-4 heteroatoms selected from O, N and S], were prepared Thus, a mixture of 5,7-dichloro-6-(3,5dichloropyridin-2-yl)pyrazolo[1,5-a]pyrimidine-3- carbonitrile (preparation given) and Et3N in CH2Cl2 was stirred with L-tert-Leucinol for 14 h at room temperature to give 75% 5-chloro-6-(3,5-dichloropyridin-2-y1)-7-[(1S)-(1-y1)-7-[(1-y1)-(1-y1)-[(1-y1)-(1-y1)-[(1-y1)-(1-y1)-[(1-y1)-(1-y1)-[(1-y1)-(1-y1)-[(1-y1)-(1-y1)-[(1-y1)-(1-y1)-[(1-y1)-(1-y1)hydroxymethyl-2,2- dimethylpropylamino)]pyrazolo[1,5-a]pyrimidine-3carbonitrile. The latter as a 250 ppm spray on barley infected with Pyrenophora teres reduced infection to 7% vs. 90% for untreated controls. 821023-60-3 ΙT

RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of pyrazolopyrimidines as agricultural fungicides)

RN 821023-60-3 CAPLUS

CN Pyrazolo[1,5-a]pyrimidine-3-carbonitrile, 5,7-dichloro-6-(2,5-dichloro-3-thienyl)- (CA INDEX NAME)

IT 948587-24-4P 948587-25-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyrazolopyrimidines as agricultural fungicides)

RN 948587-24-4 CAPLUS

CN Pyrazolo[1,5-a]pyrimidine-3-carbonitrile, 6-(3,5-dichloro-2-pyridinyl)-4,5-dihydro-7-hydroxy-5-oxo- (CA INDEX NAME)

RN 948587-25-5 CAPLUS

CN Pyrazolo[1,5-a]pyrimidine-3-carbonitrile, 5,7-dichloro-6-(3,5-dichloro-2-pyridinyl)- (CA INDEX NAME)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L14 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
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AN 2005:14401 CAPLUS Full-text

DN 142:114091

- TI Preparation of pyrazolopyrimidines as microbicides
- Gebauer, Olaf; Heinemann, Ulrich; Herrmann, Stefan; Guth, Oliver; Elbe, IN Hans-Ludwig; Gayer, Herbert; Greul, Joerg Nico; Hillebrand, Stefan; Ebbert, Ronald; Wachendorff-Neumann, Ulrike; Dahmen, Peter; Kuck, Karl-Heinz
- PΑ Bayer Cropscience Aktiengesellschaft, Germany
- SO PCT Int. Appl., 94 pp. CODEN: PIXXD2

DT Patent

LA German

| FAN.  |     | 1<br>FENT | NO.  |        |     | KIN | D   | DATE |      | ,   | APPI     | JICAT | ION :    | NO.    |     | D               | ATE  |     |
|-------|-----|-----------|------|--------|-----|-----|-----|------|------|-----|----------|-------|----------|--------|-----|-----------------|------|-----|
| ΡI    | WO  | 2005      | 0008 | <br>51 |     | A1  | _   | 2005 | 0106 |     | <br>WO 2 | 2004- | <br>EP66 | <br>09 |     | 2               | 0040 | 618 |
|       |     | W:        |      |        |     |     |     | •    |      |     |          | BG,   |          |        |     |                 |      |     |
|       |     |           | CN,  | CO,    | CR, | CU, | CZ, | DE,  | DK,  | DM, | DZ,      | EC,   | EE,      | EG,    | ES, | FΙ,             | GB,  | GD, |
|       |     |           | GE,  | GH,    | GM, | HR, | HU, | ID,  | IL,  | IN, | IS,      | JP,   | KΕ,      | KG,    | KP, | KR,             | KΖ,  | LC, |
|       |     |           |      |        |     |     |     |      |      |     |          | MK,   |          |        |     |                 |      |     |
|       |     |           | NO,  | NΖ,    | OM, | PG, | PH, | PL,  | PT,  | RO, | RU,      | SC,   | SD,      | SE,    | SG, | SK,             | SL,  | SY, |
|       |     |           | ,    | •      | ,   | ,   | •   | •    | •    | ,   | ,        | UΖ,   | ,        | ,      | •   | •               | ,    |     |
|       |     | RW:       | BW,  | GH,    | GM, | KΕ, | LS, | MW,  | MZ,  | NA, | SD,      | SL,   | SZ,      | TZ,    | UG, | ZM,             | ZW,  | ΑM, |
|       |     |           | AΖ,  | BY,    | KG, | KΖ, | MD, | RU,  | ΤJ,  | TM, | ΑT,      | BE,   | BG,      | CH,    | CY, | CZ,             | DE,  | DK, |
|       |     |           | EE,  | ES,    | FΙ, | FR, | GB, | GR,  | HU,  | IE, | ΙT,      | LU,   | MC,      | NL,    | PL, | PT,             | RO,  | SE, |
|       |     |           | •    | •      | •   | BF, | ΒJ, | CF,  | CG,  | CI, | CM,      | GΑ,   | GN,      | GQ,    | GW, | $\mathrm{ML}$ , | MR,  | NE, |
|       |     |           | •    | TD,    | ΤG  |     |     |      |      |     |          |       |          |        |     |                 |      |     |
|       |     | 1033      |      |        |     | A1  |     | 2005 |      |     |          | 2003- |          |        |     |                 | 0030 |     |
|       |     | 1035      |      |        |     | A1  |     | 2005 |      |     |          | 2003- |          |        |     |                 |      |     |
|       |     | 2004      |      |        |     |     |     | 2005 |      |     |          | 2004- |          |        |     |                 | 0040 |     |
|       |     | 2530      |      |        |     | A1  |     |      |      |     |          | 2004- |          |        |     |                 | 0040 |     |
|       | EΡ  | 1641      |      |        |     | A1  |     |      |      |     |          | 2004- |          |        |     |                 | 0040 |     |
|       |     | R:        |      |        |     |     |     |      |      |     |          | ΙT,   |          |        | NL, | SE,             | MC,  | PT, |
|       |     |           |      |        |     |     | CY, |      |      |     |          | HU,   |          |        |     | _               |      |     |
|       |     | 2004      |      |        |     |     |     | 2006 |      |     |          | 2004- |          |        |     |                 | 0040 |     |
|       |     | 1839      |      |        |     | A   |     |      |      |     |          | 2004- |          |        |     |                 | 0040 |     |
|       |     | 2007      |      |        |     |     |     | 2007 |      |     |          | 2006- |          |        |     |                 | 0040 |     |
|       |     | 2005      |      |        |     |     |     | 2007 |      |     |          | 2005- |          |        |     |                 | 0051 |     |
|       |     | 2007      |      |        |     | A1  |     | 2007 |      |     |          | 2005- |          |        |     |                 | 0051 |     |
| DD3.T |     | 2005      | _    | -      | _   | A   |     | 2006 |      |     | MX Z     | 2005- | PAI3     | 902    |     | 2               | 0051 | 219 |
| PRAI  |     | 2003      |      |        | -   |     |     | 2003 |      |     |          |       |          |        |     |                 |      |     |
|       |     | 2003      |      |        |     |     |     | 2003 |      |     |          |       |          |        |     |                 |      |     |
|       |     | 2003      |      |        | U   | A   |     | 2003 |      |     |          |       |          |        |     |                 |      |     |
| 20    |     | 2004      |      |        | 0.1 | W   |     | 2004 | пртя |     |          |       |          |        |     |                 |      |     |
| OS    | MAH | RPAT      | 142: | 1140   | ЭΙ  |     |     |      |      |     |          |       |          |        |     |                 |      |     |
| GI    |     |           |      |        |     |     |     |      |      |     |          |       |          |        |     |                 |      |     |

AB Title compds. I [R1 = (un)substituted alkyl, alkenyl, alkynyl, etc.; R2 = H, alkyl; R1 and R2 together form a heterocyclic ring; R3 = (un)substituted heterocycle; R4 = H, alkyl; R5 = halo; X = halo, CN, NO2, etc.] were prepared For example, condensation of (S)-2,2,2- trifluoroisopropylamine and dichloropyrazolopyrimidine II, e.g., prepared from 2-chloro-3- (trifluoromethyl)pyridine in 3-steps, afforded pyrazolopyrimidine III in 58% yield. In venturia inaequalis, i.e., apple scab, inhibition assays, 5- examples of compds. I exhibited over 90% protection at an application rate of 100 g/ha (sic).

IT 821023-58-9P 821023-59-0P 821023-60-3P 821023-61-4P 821023-65-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyrazolopyrimidines as microbicides)

RN 821023-58-9 CAPLUS

CN Pyrazolo[1,5-a]pyrimidine-3-carbonitrile, 5,7-dichloro-6-[3-(trifluoromethyl)-2-pyridinyl]- (CA INDEX NAME)

RN 821023-59-0 CAPLUS

CN Pyrazolo[1,5-a]pyrimidine-3-carbonitrile, 5,7-dichloro-6-(3-thienyl)- (CA INDEX NAME)

RN

RN 821023-61-4 CAPLUS

CN Pyrazolo[1,5-a]pyrimidine-3-carbonitrile, 4,5-dihydro-7-hydroxy-5-oxo-6-[3-(trifluoromethyl)-2-pyridinyl]- (CA INDEX NAME)

RN 821023-65-8 CAPLUS

CN Pyrazolo[1,5-a]pyrimidine-3-carboxaldehyde, 5,7-dichloro-6-(5-chloro-4-pyrimidinyl)- (CA INDEX NAME)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L30 ANSWER 1 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
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AN 2008:10134 CAPLUS Full-text

DN 148:121697

TI Fused thiazole derivatives as PI3 kinase inhibitors and their preparation, pharmaceutical compositions and use in the treatment of diseases

IN Alexander, Rikki Peter; Aujla, Pavandeep Singh; Crepy, Karen Viviane Lucile; Foley, Anne Marie; Franklin, Richard Jeremy; Haughan, Alan Findlay; Horsley, Helen Tracey; Jones, William Mark; Lallemand, Benedicte Irma Leonce Frederique; Mack, Stephen Robert; Morgan, Trevor; Pasau, Patrick Marie Ghislain; Phillips, David Jonathan; Sabin, Verity Margaret; Buckley, George Martin; Jenkins, Kerry; Perry, Benjamin Garfield

PA Ucb Pharma S.A., Belg.

SO PCT Int. Appl., 392pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| r AIV.   |     | TENT 1 | NO.  |      |     | KIN | D   | DATE     |      |     | APPL | ICAT | ION I | NO. |     | D   | ATE  |         |
|----------|-----|--------|------|------|-----|-----|-----|----------|------|-----|------|------|-------|-----|-----|-----|------|---------|
| ΡI       | WO  | 2008   | 0010 | 76   |     | A1  | _   | <br>2008 | 0103 | 1   |      |      |       | 90  |     | 2   | 0070 | <br>626 |
|          |     | W:     | ΑE,  | AG,  | AL, | AM, | ΑT, | ΑU,      | AZ,  | BA, | BB,  | BG,  | BH,   | BR, | BW, | BY, | BZ,  | CA,     |
|          |     |        | CH,  | CN,  | CO, | CR, | CU, | CZ,      | DE,  | DK, | DM,  | DO,  | DZ,   | EC, | EE, | EG, | ES,  | FΙ,     |
|          |     |        | GB,  | GD,  | GE, | GH, | GM, | GT,      | HN,  | HR, | HU,  | ID,  | IL,   | IN, | IS, | JP, | ΚE,  | KG,     |
|          |     |        | KM,  | KN,  | KP, | KR, | KΖ, | LA,      | LC,  | LK, | LR,  | LS,  | LT,   | LU, | LY, | MA, | MD,  | MG,     |
|          |     |        | MK,  | MN,  | MW, | MX, | MY, | MZ,      | NA,  | NG, | NΙ,  | NO,  | NZ,   | OM, | PG, | PH, | PL,  | PT,     |
|          |     |        | RO,  | RS,  | RU, | SC, | SD, | SE,      | SG,  | SK, | SL,  | SM,  | SV,   | SY, | ТJ, | TM, | TN,  | TR,     |
|          |     |        | TT,  | TZ,  | UA, | UG, | US, | UZ,      | VC,  | VN, | ZA,  | ZM,  | ZW    |     |     |     |      |         |
|          |     | RW:    | ΑT,  | BE,  | BG, | CH, | CY, | CZ,      | DE,  | DK, | EE,  | ES,  | FI,   | FR, | GB, | GR, | HU,  | IE,     |
|          |     |        | IS,  | ΙT,  | LT, | LU, | LV, | MC,      | MT,  | NL, | PL,  | PT,  | RO,   | SE, | SI, | SK, | TR,  | BF,     |
|          |     |        | ВJ,  | CF,  | CG, | CI, | CM, | GΑ,      | GN,  | GQ, | GW,  | ML,  | MR,   | NE, | SN, | TD, | TG,  | BW,     |
|          |     |        | GH,  | GM,  | KE, | LS, | MW, | MZ,      | NA,  | SD, | SL,  | SZ,  | TZ,   | UG, | ZM, | ZW, | AM,  | AZ,     |
|          |     |        | BY,  | KG,  | KΖ, | MD, | RU, | ΤJ,      | TM   |     |      |      |       |     |     |     |      |         |
| PRAI     | GB  | 2006   | -126 | 44   |     | Α   |     | 2006     | 0626 |     |      |      |       |     |     |     |      |         |
|          | GB  | 2006   | -200 | 62   |     | Α   |     | 2006     | 1010 |     |      |      |       |     |     |     |      |         |
| OS<br>GT | MAI | RPAT   | 148: | 1216 | 97  |     |     |          |      |     |      |      |       |     |     |     |      |         |

AB A series of 6,7-dihydro[1,3]thiazolo[5,4-c]pyridin-4(5H)-one derivs. of formula I , and analogs thereof, which are substituted in the 2-position by an optionally substituted morpholin-4-yl moiety, being selective inhibitors of PI3 kinase enzymes, are accordingly of benefit in medicine, for example in the treatment of inflammatory, autoimmune, cardiovascular, neurodegenerative, metabolic, oncol., nociceptive or ophthalmic conditions. Compds. of formula I wherein X is O and S; Y is (un)substituted methylene and NH and derivs.;; R1 is H and C1-6 alkyl; R2 is H, C1-6 alkyl, C1-6 alkoxy, C3-7 cycloalkyl, (hetero)aryl, etc.; R3 and R4 are independently H, C1-6 alkyl, C2-6 alkenyl, C2-6 alkynyl, C3-7 cycloalkyl, etc.; and their pharmaceutically acceptable salts and solvates thereof are claimed. Example compound II was prepared by a

general procedure (procedure given). All the invention compds. were evaluated for their PI3 kinase inhibitory activity.

IT 1000802-62-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of fused thiazole derivs. as PI3 kinase inhibitors useful in the treatment of kinase-mediated diseases)

RN 1000802-62-9 CAPLUS

CN Propanedioic acid, 2-(6-chloro-2-methyl-4-pyrimidinyl)-, 1,3-dimethyl ester (CA INDEX NAME)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L30 ANSWER 2 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
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AN 2007:1086602 CAPLUS Full-text

DN 147:385846

 ${\tt TI}$  Preparation of pyridines and pyridine N-oxides as modulators of thrombin for treatment of disease related to thrombin activity

PA Janssen Pharmaceutica, NV, Belg.

SO PCT Int. Appl., 89pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| FAN. | CNT | 1      |      |      |     |      |     |      |      |     |      |      |       |     |     |     |       |     |
|------|-----|--------|------|------|-----|------|-----|------|------|-----|------|------|-------|-----|-----|-----|-------|-----|
|      | PA: | rent : | NO.  |      |     | KIN: |     | DATE |      |     | APPL | ICAT | ION 1 | ΝΟ. |     |     | ATE   |     |
| ΡI   | WO  | 2007   | 1094 | 59   |     | A2   |     | 2007 |      |     | WO 2 | 007- | US63  | 893 |     |     | 0070  |     |
|      | WO  | 2007   | 1094 | 59   |     | А3   |     | 2008 | 0131 |     |      |      |       |     |     |     |       |     |
|      |     | W:     | ΑE,  | AG,  | AL, | AM,  | ΑT, | ΑU,  | AZ,  | BA, | BB,  | BG,  | BR,   | BW, | BY, | BZ, | CA,   | CH, |
|      |     |        | CN,  | CO,  | CR, | CU,  | CZ, | DE,  | DK,  | DM, | DZ,  | EC,  | EE,   | EG, | ES, | FI, | GB,   | GD, |
|      |     |        | GE,  | GH,  | GM, | GT,  | HN, | HR,  | HU,  | ID, | IL,  | IN,  | IS,   | JP, | KE, | KG, | KM,   | KN, |
|      |     |        | KP,  | KR,  | KΖ, | LA,  | LC, | LK,  | LR,  | LS, | LT,  | LU,  | LY,   | MA, | MD, | MG, | MK,   | MN, |
|      |     |        | MW,  | MX,  | MY, | MZ,  | NA, | NG,  | NI,  | NO, | NZ,  | OM,  | PG,   | PH, | PL, | PT, | RO,   | RS, |
|      |     |        | RU,  | SC,  | SD, | SE,  | SG, | SK,  | SL,  | SM, | SV,  | SY,  | ТJ,   | TM, | TN, | TR, | TT,   | TZ, |
|      |     |        | UA,  | UG,  | US, | UZ,  | VC, | VN,  | ZA,  | ZM, | ZW   |      |       |     |     |     |       |     |
|      |     | RW:    | ΑT,  | BE,  | BG, | CH,  | CY, | CZ,  | DE,  | DK, | EE,  | ES,  | FI,   | FR, | GB, | GR, | HU,   | ΙE, |
|      |     |        | IS,  | ΙΤ,  | LT, | LU,  | LV, | MC,  | MT,  | NL, | PL,  | PT,  | RO,   | SE, | SI, | SK, | TR,   | BF, |
|      |     |        | ВJ,  | CF,  | CG, | CI,  | CM, | GΑ,  | GN,  | GQ, | GW,  | ML,  | MR,   | ΝE, | SN, | TD, | ΤG,   | BW, |
|      |     |        | GH,  | GM,  | ΚE, | LS,  | MW, | MZ,  | NA,  | SD, | SL,  | SZ,  | TZ,   | UG, | ZM, | ZW, | AM,   | ΑZ, |
|      |     |        | BY,  | KG,  | KΖ, | MD,  | RU, | ТJ,  | TM,  | ΑP, | EA,  | EP,  | ΟA    |     |     |     |       |     |
|      | US  | 2007   | 2252 | 82   |     | A1   |     | 2007 | 0927 |     | US 2 | 007- | 6855  | 44  |     | 2   | 0070. | 313 |
| PRAI | US  | 2006   | -784 | 361P |     | P    |     | 2006 | 0321 |     |      |      |       |     |     |     |       |     |
| OS   | MAI | RPAT   | 147: | 3858 | 46  |      |     |      |      |     |      |      |       |     |     |     |       |     |
| GI   |     |        |      |      |     |      |     |      |      |     |      |      |       |     |     |     |       |     |

The present invention describes compds. of Formula I (wherein Z is H, F, Cl, Br, CN, C1-4 alkyl, etc.; X is absent or O; Q is H or F; W is -CH2C(R1)2R2; R1 is H, C1-4-alkyl, halo, or both R1s form a cycloalkyl ring; R2 is heterocyclyl, Ph, 4-fluorophenyl, etc.; Y is substituted benzisoxazolyl, substituted isoquinolinyl, etc.) or a pharmaceutically acceptable salt thereof, for the prophylaxis, or treatment of diseases and conditions related to thrombin activity in a mammal. Also provided are processes for preparing the compds. of Formula I. Example compound II was prepared in a 10 step synthesis culminating in the reaction of III with 2,2-difluoro-2-pyridin-2-ylethylamine. In an assay to measure inhibitory activity toward thrombin, II had an IC50 of approx. 3.3 nM.

IT 950768-41-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyridines and pyridine N-oxides as modulators of thrombin for treatment of disease)

RN 950768-41-9 CAPLUS

CN Propanedioic acid, 2-(3,6-dichloro-2-pyridinyl)-, 1-(1,1-dimethylethyl) 3-ethyl ester (CA INDEX NAME)

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L30
    ANSWER 3 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
ΑN
    2007:1022145 CAPLUS Full-text
DN
    147:365513
    Preparation of pyrazolo[1,5-a]pyrimidines as agricultural fungicides
ΤI
    Dietz, Jochen; Grote, Thomas; Grammenos, Wassilios; Mueller, Bernd;
IN
    Lohmann, Jan Klaas; Renner, Jens; Ulmschneider, Sarah
PΑ
    BASF Aktiengesellschaft, Germany
    PCT Int. Appl., 150pp.
SO
    CODEN: PIXXD2
DT
    Patent
    German
LA
FAN.CNT 1
    PATENT NO.
                       KIND
                               DATE
                                         APPLICATION NO.
                                                                 DATE
                               _____
                                          ______
    _____
                        ____
                                        WO 2007-EP52104
    WO 2007101859
                               20070913
РΤ
                        A 1
                                                                 20070306
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN,
            KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN,
            MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
            RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
            UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
            GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
            BY, KG, KZ, MD, RU, TJ, TM
PRAI EP 2006-110739
                       Α
                           20060307
    EP 2006-111155
                         Α
                               20060315
OS
    MARPAT 147:365513
GΙ
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AΒ The title compds. [I; R1 = H, (halo)alkyl, (halo)alkenyl, (halo)alkynyl, (halo)cycloalkyl, (halo)cycloalkenyl, (halo)alkoxy, alkenyloxy, alkynyloxy, cycloalkoxy, amino, alkylamino, dialkylamino, Ph, naphthyl 5-6 membered (saturated) aromatic heterocyclyl containing 1-4 heteroatoms selected from O, N and S; R2 = CR6R7(CR8R9)q(CR10R11)pYZ; R6-R11 = H, (halo)alkyl, (halo)alkenyl, (halo)alkynyl, (halo)cycloalkyl, (halo)cycloalkenyl, etc.; Y = S, O; Z = H, CO2H, CHO, alkyl, (halo)alkyl, (halo)alkynyl, etc. q = 0, 1; p =0-5; R3, R4 = H, halo, cyano, NO2, (halo)alkyl, (halo)alkenyl, (halo)alkynyl, hydroxyalkyl, alkoxyalkyl, (halo)cycloalkyl, (halo)alkoxy, alkylthio, alkylsulfynyl, alkylsulfonyl, CHO, thiocarbamoyl, alkylcarbonyl, alkoxycarbonyl, alkylaminocarbonyl, alkoxyiminocarbonyl, hydroxyiminoalkyl, etc.; X = H, cyano, (halo)alkyl, (halo)alkoxy; R5 = 5-6 membered (saturated) aromatic (substituted) heterocyclyl containing 1-4 heteroatoms selected from O, N and S], were prepared Thus, a mixture of 5,7-dichloro-6-(3,5dichloropyridin-2-yl)pyrazolo[1,5-a]pyrimidine-3- carbonitrile (preparation given) and Et3N in CH2Cl2 was stirred with L-tert-Leucinol for 14 h at room temperature to give 75% 5-chloro-6-(3,5- dichloropyridin-2-yl)-7-[(1S)-(1hydroxymethyl-2,2- dimethylpropylamino)]pyrazolo[1,5-a]pyrimidine-3-carbonitrile. The latter as a 250 ppm spray on barley infected with Pyrenophora teres reduced infection to 7% vs. 90% for untreated controls. 120569-92-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyrazolopyrimidines as agricultural fungicides) 120569-92-8 CAPLUS

CN Propanedioic acid, 2-(3,5-dichloro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

ΙT

RN

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 4 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
L30
    2007:641268 CAPLUS Full-text
ΑN
DN
    147:72775
    Preparation of pyridazine compounds as agrochemical fungicides
ΤI
IN
    Manabe, Akio
    Sumitomo Chemical Company, Limited, Japan
PA
SO
    PCT Int. Appl., 86pp.
    CODEN: PIXXD2
DT
    Patent
LA
    Japanese
FAN.CNT 1
    PATENT NO.
                        KIND
                               DATE
                                           APPLICATION NO.
                               _____
                                           _____
    WO 2007066601
                               20070614
                                         WO 2006-JP324132
PΙ
                        A1
                                                                  20061128
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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            GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP,
            KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,
            MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
            RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
            UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
            CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
            GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
            KG, KZ, MD, RU, TJ, TM
                                          JP 2006-321455
    JP 2007254456
                         Α
                               20071004
                                                                  20061129
PRAI JP 2005-353177
                         Α
                               20051207
                        Α
    JP 2006-44993
                               20060222
    MARPAT 147:72775
OS
GΙ
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$$\begin{bmatrix} & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & &$$

AΒ

Title compds. I [R1 = C1, Br, alkyl, etc.; R2 = alkyl, R3 = halo, nitro, cyano, etc.; m = 0-5; Q = aromatic heterocycle containing at least one

nitrogen atom (wherein aromatic heterocycle is optionally substituted with halo, nitro, cyano, etc.)] were prepared For example, reaction of  $4-(4-chlorophenyl)-5-hydroxy-5-methyl-3-(2-pyridyl)-2(5H)-furanone, e.g., prepared from 4'-chloropropiophenone in 2 steps, with hydrazine hydrate followed by treatment with POCl3 afforded compound II. Compound II controlled Alternaria brassicioola by <math>\geq 70\%$  at 500 ppm.

IT 120569-92-8P 940933-22-2P 940933-26-6P 940933-35-7P 940933-39-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyridazine compds. as agrochem. fungicides)

RN 120569-92-8 CAPLUS

CN Propanedioic acid, 2-(3,5-dichloro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

RN 940933-22-2 CAPLUS

CN Propanedioic acid, 2-(3-chloro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

RN 940933-26-6 CAPLUS

CN Propanedioic acid, 2-[3-(trifluoromethyl)-2-pyridinyl]-, 1,3-diethyl ester (CA INDEX NAME)

RN 940933-35-7 CAPLUS

CN Propanedioic acid, 2-(5-chloro-3-fluoro-2-pyridinyl)-, 1,3-diethyl ester

RN 940933-39-1 CAPLUS CN Propanedioic acid, 2-(3-fluoro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L30 ANSWER 5 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
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AN 2006:1229159 CAPLUS Full-text

DN 146:7983

ΤI Preparation of 7-amino-6-heteroarylimidazo[1,2-a]pyrimidines as agrochemical fungicides.

ΙN Wagner, Oliver

PABasf Aktiengesellschaft, Germany

PCT Int. Appl., 73pp. SO CODEN: PIXXD2

Patent DT

LA German

GΙ

| FAN. | CNT | 1    |      |      |      |      |        |            |      |     |      |     |     |     |     |     |      |     |
|------|-----|------|------|------|------|------|--------|------------|------|-----|------|-----|-----|-----|-----|-----|------|-----|
|      | PA: | TENT | NO.  |      |      | KIN: | D<br>_ | DATE       |      |     | APPL |     |     | NO. |     |     | ATE  |     |
| PI   | WO  | 2006 | 1227 | 40   |      | A2   |        | 2006       | 1123 |     | WO 2 |     |     |     |     |     | 0060 |     |
|      | WO  | 2006 | 1227 | 40   |      | А3   |        | 2007       | 0222 |     |      |     |     |     |     |     |      |     |
|      |     | W:   | ΑE,  | AG,  | AL,  | AM,  | ΑT,    | ΑU,        | AZ,  | BA, | BB,  | BG, | BR, | BW, | BY, | BZ, | CA,  | CH, |
|      |     |      | CN,  | CO,  | CR,  | CU,  | CZ,    | DE,        | DK,  | DM, | DZ,  | EC, | EE, | EG, | ES, | FI, | GB,  | GD, |
|      |     |      | GE,  | GH,  | GM,  | HR,  | HU,    | ID,        | IL,  | IN, | IS,  | JP, | ΚE, | KG, | KM, | KN, | KP,  | KR, |
|      |     |      | KΖ,  | LC,  | LK,  | LR,  | LS,    | LT,        | LU,  | LV, | LY,  | MA, | MD, | MG, | MK, | MN, | MW,  | MX, |
|      |     |      | MZ,  | NA,  | NG,  | NΙ,  | NO,    | NZ,        | OM,  | PG, | PH,  | PL, | PT, | RO, | RU, | SC, | SD,  | SE, |
|      |     |      | SG,  | SK,  | SL,  | SM,  | SY,    | ТJ,        | TM,  | TN, | TR,  | TT, | TZ, | UA, | UG, | US, | UZ,  | VC, |
|      |     |      | VN,  | YU,  | ZA,  | ZM,  | ZW     |            |      |     |      |     |     |     |     |     |      |     |
|      |     | RW:  | ΑT,  | BE,  | BG,  | CH,  | CY,    | CZ,        | DE,  | DK, | EE,  | ES, | FI, | FR, | GB, | GR, | HU,  | ΙE, |
|      |     |      | IS,  | ΙΤ,  | LT,  | LU,  | LV,    | MC,        | NL,  | PL, | PT,  | RO, | SE, | SI, | SK, | TR, | BF,  | ВJ, |
|      |     |      | CF,  | CG,  | CI,  | CM,  | GΑ,    | GN,        | GQ,  | GW, | ML,  | MR, | ΝE, | SN, | TD, | TG, | BW,  | GH, |
|      |     |      | GM,  | ΚE,  | LS,  | MW,  | MΖ,    | NA,        | SD,  | SL, | SZ,  | TZ, | UG, | ZM, | ZW, | AM, | AZ,  | BY, |
|      |     |      | KG,  | KΖ,  | MD,  | RU,  | ТJ,    | $_{ m TM}$ |      |     |      |     |     |     |     |     |      |     |
| PRAI | DE  | 2005 | -102 | 0050 | 2256 | 0 A  |        | 2005       | 0517 |     |      |     |     |     |     |     |      |     |
| OS   | MAI | RPAT | 146: | 7983 |      |      |        |            |      |     |      |     |     |     |     |     |      |     |

AΒ Title compds. [I; Het = (substituted) 5-6 membered heteroaryl containing 1-4of O, S, N; X = H, OH, halo, cyano, NR3R4, (substituted) alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkenyl, alkynyl; R1-R4 = H, (substituted) alkyl, haloalkyl, alkoxy, cycloalkyl, cycloalkoxy, bicycloalkyl, halocycloalkyl, alkenyl, alkynyl, alkynyloxy, alkenyloxy, Ph, naphthyl, 5-6 membered heterocyclyl, etc.; R1R2N = (substituted) 5-6 membered heterocyclyl, heteroaryl; Y1, Y2 = H, halo, cyano, alkyl, haloalkyl, cycloalkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, haloalkoxy], were prepared Tested I (e.g. Y1, Y2 = H; NR1R2 = 4-methylpiperidin-1-yl; Het = 3,5-dichloropyridin-2yl; X = Cl) at 125 ppm gave complete control of Alternaria solani.

ΙT 120569-92-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aminoheteroarylimidazopyrimidines as agrochem. fungicides)

RN 120569-92-8 CAPLUS

CN Propanedioic acid, 2-(3,5-dichloro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

IT 896107-33-8P 896107-35-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of aminoheteroarylimidazopyrimidines as agrochem. fungicides)

RN 896107-33-8 CAPLUS

CN Propanedioic acid, 2-(3,5-difluoro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

RN 896107-35-0 CAPLUS

CN Propanedioic acid, 2-(6-chloro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

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L30
    ANSWER 6 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
ΑN
    2006:634725 CAPLUS Full-text
DN
    145:103571
    Process for the preparation of 2-pyridylethylcarboxamide derivatives
ΤI
    Lhermitte, Frederic; Coqueron, Pierre-Yves; Desbordes, Philippe; Himmler,
IN
PΑ
    Bayer Cropscience S. A., Fr.
SO
    PCT Int. Appl., 37 pp.
    CODEN: PIXXD2
DT
    Patent
    English
LA
FAN.CNT 1
                              DATE
                       KIND
    PATENT NO.
                                         APPLICATION NO. DATE
                              _____
                                          ______
    _____
                       ____
                                                                 _____
    WO 2006067103
                               20060629
                                         WO 2005-EP56895
                                                                20051219
РΤ
                       A2
    WO 2006067103
                       А3
                             20061116
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
            KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
            MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
            SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
            VN, YU, ZA, ZM, ZW
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
            CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
            GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
            KG, KZ, MD, RU, TJ, TM
    EP 1831169
                              20070912
                                         EP 2005-823830
                                                                 20051219
                        Α2
        R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
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    CN 101080391
                        Α
                             20071128
                                        CN 2005-80043576
                                                                20051219
    IN 2007DN03483
                        Α
                              20070831
                                          IN 2007-DN3483
                                                                 20070510
    MX 200707105
                        A
                              20070808
                                         MX 2007-7105
                                                                 20070613
                                         KR 2007-716637
                                                                 20070720
    KR 2007087668
                       A
                              20070828
PRAI EP 2004-356203
                       A
                             20041221
    WO 2005-EP56895
                        W
                               20051219
    CASREACT 145:103571; MARPAT 145:103571
OS
     N-[2-(2-pyridyl)ethyl]carboxamide derivs. 2-pyridyl-CH2CHR1NR2CO-A [the
AΒ
     pyridyl ring may be substituted; R1 is H, alkyl, haloalkyl, or alkoxycarbonyl;
     R2 is H or cyclopropyl; A is (un)substituted Ph or non-fused heterocyclyl]
     were prepared by treating 2-pyridyl-CHR3CO2-Alk (R3 is H or CO2-Alk, where Alk
     is alkyl) with AcOCHR1NR2CO-A, followed by decarboxylation. Thus, treatment
     of di-Et 3-chloro-5-(trifluoromethyl)-2- pyridylmalonate (I) with N-acetoxy-2-
     (trifluoromethyl)benzamide (II) in THF containing NaH and decarboxylation (32%
     HC1/KC1/NMP) afforded N-[2-[3-chloro-5-(trifluoromethyl)-2-pyridyl]ethyl]-2-
     (trifluoromethyl)benzamide. Reactant I was prepared by reaction of 2,3-
     dichloro-5-(trifluoromethyl)pyridine with di-Et malonate and reactant II was
     prepared from 2-(trifluoromethyl)benzoyl chloride by amidation,
     hydroxymethylation with formaldehyde, and acetylation.
ΙT
    172527-71-8P 477859-76-0P
    RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
```

(preparation of pyridylethylcarboxamide derivs.)
RN 172527-71-8 CAPLUS
CN Propanedioic acid, [3-chloro-5-(trifluoromethyl)-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

RN 477859-76-0 CAPLUS

CN Propanedioic acid, [3-chloro-5-(trifluoromethyl)-2-pyridinyl]-, dimethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} F_3C & & & \\ \hline & N & & \\ \hline & CH-C-OMe \\ \hline & C-OMe \\ \hline & \\ \end{array}$$

L30 ANSWER 7 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2006:630770 CAPLUS Full-text

DN 145:83378

TI Preparation of pyrimidine derivatives as thrombin inhibitors for treatment of thrombin-related diseases

IN Bulat, Stephan; Bosio, Sara; Feurer, Achim; Papadopoulos, Michael Arthur; Rosenbaum, Claudia; Matassa, Victor Giulo

PA Santhera Pharmaceuticals (Schweiz) GmbH, Switz.

SO Eur. Pat. Appl., 32 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

GΙ

| FAN. |    |          |      |      |     |     | _   |            |      |     |      |      |       |     |     | _   |      |     |
|------|----|----------|------|------|-----|-----|-----|------------|------|-----|------|------|-------|-----|-----|-----|------|-----|
|      | PA | TENT     | NO.  |      |     | KIN |     | DATE       |      | -   | APPL | ICAT | ION I | NO. |     | D.  | ATE  |     |
| ΡI   | EP | <br>1674 | 464  |      |     |     |     | 2006       | 0628 |     | EP 2 | 004- | 3072. | 2   |     | 2   | 0041 | 223 |
|      |    | R:       | ΑT,  | BE,  | CH, | DE, | DK, | ES,        | FR,  | GB, | GR,  | IT,  | LI,   | LU, | NL, | SE, | MC,  | PT, |
|      |    |          | ΙE,  | SI,  | LT, | LV, | FI, | RO,        | MK,  | CY, | AL,  | TR,  | BG,   | CZ, | EE, | HU, | PL,  | SK, |
|      |    |          | BA,  | HR,  | IS, | YU  |     |            |      |     |      |      |       |     |     |     |      |     |
|      | WO | 2006     | 0668 | 99   |     | A1  |     | 2006       | 0629 | ,   | WO 2 | 005- | EP13  | 806 |     | 2   | 0051 | 221 |
|      |    | W:       | ΑE,  | AG,  | AL, | AM, | ΑT, | ΑU,        | ΑZ,  | BA, | BB,  | BG,  | BR,   | BW, | BY, | BZ, | CA,  | CH, |
|      |    |          | CN,  | CO,  | CR, | CU, | CZ, | DE,        | DK,  | DM, | DZ,  | EC,  | EE,   | EG, | ES, | FI, | GB,  | GD, |
|      |    |          | GE,  | GH,  | GM, | HR, | HU, | ID,        | IL,  | IN, | IS,  | JP,  | ΚE,   | KG, | KM, | KN, | KP,  | KR, |
|      |    |          | KΖ,  | LC,  | LK, | LR, | LS, | LT,        | LU,  | LV, | LY,  | MA,  | MD,   | MG, | MK, | MN, | MW,  | MX, |
|      |    |          | MZ,  | NA,  | NG, | NΙ, | NO, | NΖ,        | OM,  | PG, | PH,  | PL,  | PT,   | RO, | RU, | SC, | SD,  | SE, |
|      |    |          | SG,  | SK,  | SL, | SM, | SY, | ТJ,        | TM,  | TN, | TR,  | TT,  | TZ,   | UA, | UG, | US, | UZ,  | VC, |
|      |    |          | VN,  | YU,  | ZA, | ZM, | ZW  |            |      |     |      |      |       |     |     |     |      |     |
|      |    | RW:      | AT,  | BE,  | BG, | CH, | CY, | CZ,        | DE,  | DK, | EE,  | ES,  | FI,   | FR, | GB, | GR, | HU,  | ΙE, |
|      |    |          | IS,  | ΙΤ,  | LT, | LU, | LV, | MC,        | NL,  | PL, | PT,  | RO,  | SE,   | SI, | SK, | TR, | BF,  | ВJ, |
|      |    |          | CF,  | CG,  | CI, | CM, | GΑ, | GN,        | GQ,  | GW, | ML,  | MR,  | NE,   | SN, | TD, | ΤG, | BW,  | GH, |
|      |    |          | GM,  | KE,  | LS, | MW, | ΜZ, | NA,        | SD,  | SL, | SZ,  | TZ,  | UG,   | ZM, | ZW, | AM, | AZ,  | BY, |
|      |    |          | KG,  | KΖ,  | MD, | RU, | ΤJ, | $_{ m MT}$ |      |     |      |      |       |     |     |     |      |     |
| PRAI | EP | 2004     | -307 | 22   |     | Α   |     | 2004       | 1223 |     |      |      |       |     |     |     |      |     |
| OS   | MA | RPAT     | 145: | 8337 | 8   |     |     |            |      |     |      |      |       |     |     |     |      |     |

$$A^{-B} \stackrel{N}{\underset{H}{\longrightarrow}} \stackrel{R^{1}}{\underset{N}{\longrightarrow}} \stackrel{R^{2}}{\underset{G}{\longrightarrow}} \stackrel{R^{3}}{\underset{D}{\longrightarrow}} \stackrel{E}{\underset{N}{\longrightarrow}} \stackrel{C1}{\underset{N}{\longrightarrow}} \stackrel{C1}$$

AB The invention relates to compds. of formula I (wherein a = 0-1; R1 = H, halogen, CN, CNO, or (un)substituted C1-4-alkyl; R2 = H, halogen, CN, CNO, C1-6-alkyl, etc.; R3 = H; (un)substituted C1-4-alkyl, or (un)substituted C3-6 cycloalkyl; A = Ph, naphthyl, heterocycle, and heterobicycle, all optionally

substituted; B and D = substituents based on C1-6-alkyl; E = Ph, naphthyl, and heterocycle, all optionally substituted; G = -CH(R37)-C(R38R39)-, -CH(R37)-C(R40R41)-C(R38R39)-; R37, R40, R41 = H, F, C1-4 alkyl, etc.; wherein R38, R39 = H, C1-4 alkyl, etc.). Said compds. are useful as thrombin inhibitors. The invention also relates to the production and use thereof as medicament. For example, II was prepared in 7 steps from an initial reaction of diethylmalonate and 2,4,5- trichloropyrimidine via piperidine-1-carboxylic acid and 1H-indazole intermediates. I exhibited thrombin Ki values of  $\leq$  10  $\mu M$ .

IT 894095-08-0P, 2-(2,5-Dichloropyrimidin-4-yl) malonic acid diethyl ester

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyrimidine derivs. as thrombin inhibitors for treatment of thrombin-related diseases)

RN 894095-08-0 CAPLUS

CN Propanedioic acid, (2,5-dichloro-4-pyrimidinyl)-, diethyl ester (9CI) (CA INDEX NAME)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
Preparation of 7-amino-6-heteroaryl-1,2,4-triazolo[1,5-A]pyrimidines as
ΤI
    agrochemical fungicides
    Wagner, Oliver; Grote, Thomas; Rheinheimer, Joachim; Nave, Barbara;
IN
    Stierl, Reinhard
    BASF Aktiengesellschaft, Germany
PA
    PCT Int. Appl., 112 pp.
SO
    CODEN: PIXXD2
DT
    Patent
LA
    German
FAN.CNT 2
                                                                  DATE
    PATENT NO.
                        KIND
                               DATE
                                           APPLICATION NO.
    _____
                        ____
                               _____
                                          ______
                                                                  _____
    WO 2006066818
                        A2
                               20060629
                                          WO 2005-EP13577
                                                                  20051216
PΤ
    WO 2006066818
                        А3
                               20061102
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
            KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
            MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
            SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
            VN, YU, ZA, ZM, ZW
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
            CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
            GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
            KG, KZ, MD, RU, TJ, TM
    EP 1828191
                               20070905
                                          EP 2005-816549
                                                                  20051216
                         Α2
           AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
    CN 101080409
                        Α
                              20071128
                                        CN 2005-80043367 20051216
    IN 2007KN02126
                        Α
                               20070907
                                          IN 2007-KN2126
                                                                  20070611
PRAI DE 2004-102004060958 A
                               20041217
    DE 2004-102004062199 A
                               20041223
    WO 2005-EP13577
                       W
                               20051216
    MARPAT 145:103702
OS
GΙ
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ANSWER 8 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

2006:627599 CAPLUS Full-text

L30

ΑN

DN

145:103702

AB Title compds. I [R3 = pyridinyl, pyridazinyl, pyrazinyl, etc.; R1, R2 = H, alkyl, haloalkyl, etc.; X = H, OH, halo, etc.; Y = H, halo, CN, etc.] were prepared For example, condensation of 4-methylpiperidine and dichloropyrimidine II afforded triazolopyrimidine III in 48% yield. In alternaria solani tomato protection assays, 42-examples of compds. I at 250 ppm exhibited 90% protection after 5-days.

IT 896107-33-8P 896107-34-9P 896107-35-0P 896107-47-4P 896107-50-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of aminoheteroaryltriazolopyrimidines as agrochem. fungicides)

RN 896107-33-8 CAPLUS

CN Propanedioic acid, 2-(3,5-difluoro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

RN 896107-34-9 CAPLUS

CN Propanedioic acid, (3,5-dichloro-2-pyridinyl)-, dimethyl ester (9CI) (CA INDEX NAME)

RN 896107-35-0 CAPLUS

CN Propanedioic acid, 2-(6-chloro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

RN 896107-47-4 CAPLUS

CN Propanedioic acid, (3,5-dibromo-2-pyridinyl)-, dimethyl ester (9CI) (CA INDEX NAME)

RN 896107-50-9 CAPLUS

CN Propanedioic acid, (3-iodo-2-pyridinyl)-, diethyl ester (9CI) (CA INDEX NAME)

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L30
    ANSWER 9 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
     2006:240494 CAPLUS Full-text
ΑN
DN
     144:312096
     Preparation of morpholine compounds as CCR3 antagonists
ΤI
     Tanaka, Yoshihito; Takeda, Shuzo; Higashi, Hidemitsu; Matsuura, Mamoru;
ΙN
     Kobayashi, Fujio; Hamada, Maiko; Tanaka, Minoru
     Mitsubishi Pharma Corporation, Japan
PA
     PCT Int. Appl., 275 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     Japanese
FAN.CNT 1
     PATENT NO.
                        KIND
                               DATE
                                           APPLICATION NO.
                                                                  DATE
                                           ______
     _____
                        ____
                               _____
     WO 2006028284
                                20060316
                                          WO 2005-JP17002
РΤ
                         Α1
                                                                   20050908
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
             NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
             SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
             ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
     CA 2579207
                         Α1
                                           CA 2005-2579207
                                20060316
                                                                   20050908
     EP 1801108
                               20070627
                                           EP 2005-783689
                         Α1
                                                                   20050908
            AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
     CN 101014580
                               20070808
                                          CN 2005-80030137
                         Α
                                                                   20050908
     IN 2007CN01421
                               20070831
                                           IN 2007-CN1421
                                                                   20070405
                         Α
     KR 2007099528
                               20071009
                                           KR 2007-707863
                                                                   20070406
                         Α
                                           US 2007-662228
     US 2007265257
                               20071115
                                                                   20070413
                         Α1
PRAI JP 2004-261655
                         Α
                               20040908
     WO 2005-JP17002
                         W
                               20050908
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$$\mathbb{Z}_{-Y} \xrightarrow{X} \mathbb{E}_{\mathbb{S}} \mathbb{CH2}_{\mathbb{N}} \mathbb{N} \mathbb{H} \mathbb{A}$$

MARPAT 144:312096

OS GI

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ &$$

Title compds. I [ring A = (un)substituted aryl, (un)substituted heteroaryl; ring B = (un)substituted arylene, (un)substituted divalent heterocycle, (un)substituted cycloalkylene; m = 0-2; n = 1-5; X = bond, -NH-, -CO-, etc.; Y = bond, -NH-, -CO-, etc.; Z = H, halo, (un)substituted alkyl, etc.] were prepared For example, reaction of (2S)-N-[[4-(3,4-dichlorobenzyl)morpholin-2-yl]methyl]chloroacetamide·HCl, e.g., prepared from (2S)-2-aminomethyl-4-(3,4-dichlorobenzyl)morpholine·2HCl in 2 steps, with 4-ethoxycarbonyl-2-mercaptothiazole followed by hydrolysis using NaOH afforded compound II [R = CO2H]. In eosinophil-chemokine binding inhibition assays, the IC50 value of compound II [R = CH2CO2H] was 2.4 nmol/L. Compds. I are claimed useful for the treatment of asthma, sinusitis, etc.

IT 879403-14-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of morpholine compds. as CCR3 antagonists for treatment of asthma, sinusitis, etc.)

RN 879403-14-2 CAPLUS

CN Propanedioic acid, (2-chloro-4-pyrimidinyl)-, diethyl ester (9CI) (CA INDEX NAME)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L30 ANSWER 10 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
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- Preparation of pyrazolopyrimidines as microbicides ΤI
- Gebauer, Olaf; Heinemann, Ulrich; Herrmann, Stefan; Guth, Oliver; Elbe, ΙN Hans-Ludwig; Gayer, Herbert; Greul, Joerg Nico; Hillebrand, Stefan; Ebbert, Ronald; Wachendorff-Neumann, Ulrike; Dahmen, Peter; Kuck, Karl-Heinz
- PΑ Bayer Cropscience Aktiengesellschaft, Germany
- SO PCT Int. Appl., 94 pp. CODEN: PIXXD2

DT Patent

LA German FAN.CNT 1

| FAN. |     | 1<br>FENT | NO.  |      |     | KIN | D   | DATE |      |     | APPI | LICAT          | ION :    | NO. |     | Di  | ATE  |     |
|------|-----|-----------|------|------|-----|-----|-----|------|------|-----|------|----------------|----------|-----|-----|-----|------|-----|
| ΡI   | WO  | 2005      | 0008 | 51   |     | A1  | _   | 2005 | 0106 |     | WO 2 | 2004-          | <br>EP66 | 09  |     | 2   | 0040 | 618 |
|      |     | W:        | ΑE,  | AG,  | AL, | AM, | ΑT, | ΑU,  | AZ,  | ΒA, | BB,  | BG,            | BR,      | BW, | BY, | BZ, | CA,  | CH, |
|      |     |           | CN,  | CO,  | CR, | CU, | CZ, | DE,  | DK,  | DM, | DZ,  | EC,            | EE,      | EG, | ES, | FΙ, | GB,  | GD, |
|      |     |           | GE,  | GH,  | GM, | HR, | HU, | ID,  | IL,  | IN, | IS,  | JP,            | ΚE,      | KG, | KP, | KR, | KΖ,  | LC, |
|      |     |           | LK,  | LR,  | LS, | LT, | LU, | LV,  | MA,  | MD, | MG,  | , MK,          | MN,      | MW, | MX, | MZ, | NA,  | NΙ, |
|      |     |           | NO,  | NZ,  | OM, | PG, | PH, | PL,  | PT,  | RO, | RU,  | , SC,          | SD,      | SE, | SG, | SK, | SL,  | SY, |
|      |     |           | ТJ,  | TM,  | TN, | TR, | TT, | TZ,  | UA,  | UG, | US,  | , UZ,          | VC,      | VN, | YU, | ZA, | ZM,  | ZW  |
|      |     | RW:       | BW,  | GH,  | GM, | KE, | LS, | MW,  | MZ,  | NΑ, | SD,  | , SL,          | SZ,      | TZ, | UG, | ZM, | ZW,  | ΑM, |
|      |     |           | AΖ,  | BY,  | KG, | KZ, | MD, | RU,  | ТJ,  | TM, | ΑT,  | , BE,          | ВG,      | CH, | CY, | CZ, | DE,  | DK, |
|      |     |           |      |      |     |     |     |      |      |     |      | , LU,          |          |     |     |     |      |     |
|      |     |           |      |      | •   | BF, | ВJ, | CF,  | CG,  | CI, | CM,  | GA,            | GN,      | GQ, | GW, | ML, | MR,  | NE, |
|      |     |           | •    | TD,  | ΤG  |     |     |      |      |     |      |                |          |     |     | _   |      |     |
|      |     | 1033      |      |      |     | A1  |     | 2005 |      |     |      | 2003-          |          |     |     |     | 0030 |     |
|      |     | 1035      |      |      |     | A1  |     |      |      |     |      | 2003-          |          |     |     |     | 0031 |     |
|      |     | 2004      |      |      |     |     |     |      |      |     |      | 2004-          |          |     |     |     | 0040 |     |
|      |     | 2530.     |      |      |     | A1  |     |      |      |     |      | 2004-          |          |     |     |     | 0040 |     |
|      | ĽР  | 1641      |      |      |     |     |     | 2006 |      |     |      | 2004-<br>, IT, |          |     |     |     | 0040 |     |
|      |     | K:        |      |      |     |     |     |      |      |     |      | , 11,<br>, HU, |          |     | мь, | SE, | MC,  | PI, |
|      | BB  | 2004      |      |      |     |     | C1, | 2006 |      |     |      | 2004-          |          |     |     | 2   | 0040 | 618 |
|      |     | 1839      |      |      |     | A   |     |      |      |     |      | 2004<br>2004   |          |     |     |     | 0040 |     |
|      |     | 2007      |      |      |     |     |     | 2007 |      |     |      | 2006-          |          |     |     |     | 0040 |     |
|      |     | 2005      |      |      |     |     |     | 2007 |      |     |      | 2005-          |          |     |     |     | 0051 |     |
|      |     | 2007      |      |      |     | A1  |     | 2007 | 0215 |     |      | 2005-          |          |     |     |     | 0051 |     |
|      | MX  | 2005      | PA13 | 902  |     | А   |     | 2006 | 0224 |     | MX 2 | 2005-          | PA13     | 902 |     | 2   | 0051 | 219 |
| PRAI | DE  | 2003      | -103 | 2899 | 6   | A   |     | 2003 | 0627 |     |      |                |          |     |     |     |      |     |
|      | DE  | 2003      | -103 | 3936 | 0   | Α   |     | 2003 | 0827 |     |      |                |          |     |     |     |      |     |
|      | DE  | 2003      | -103 | 5757 | 0   | Α   |     | 2003 | 1210 |     |      |                |          |     |     |     |      |     |
|      | WO  | 2004      | -EP6 | 609  |     | W   |     | 2004 | 0618 |     |      |                |          |     |     |     |      |     |
| OS   | MAI | RPAT      | 142: | 1140 | 91  |     |     |      |      |     |      |                |          |     |     |     |      |     |
| GI   |     |           |      |      |     |     |     |      |      |     |      |                |          |     |     |     |      |     |

AN 2005:14401 CAPLUS Full-text

DN 142:114091

AB Title compds. I [R1 = (un)substituted alkyl, alkenyl, alkynyl, etc.; R2 = H, alkyl; R1 and R2 together form a heterocyclic ring; R3 = (un)substituted heterocycle; R4 = H, alkyl; R5 = halo; X = halo, CN, NO2, etc.] were prepared For example, condensation of (S)-2,2,2- trifluoroisopropylamine and dichloropyrazolopyrimidine II, e.g., prepared from 2-chloro-3- (trifluoromethyl)pyridine in 3-steps, afforded pyrazolopyrimidine III in 58% yield. In venturia inaequalis, i.e., apple scab, inhibition assays, 5- examples of compds. I exhibited over 90% protection at an application rate of 100 g/ha (sic).

IT 809276-86-6P 809276-87-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of pyrazolopyrimidines as microbicides)

RN 809276-86-6 CAPLUS

RN 809276-87-7 CAPLUS

CN Propanedioic acid, (5-chloro-4-pyrimidinyl)-, dimethyl ester (9CI) (CA INDEX NAME)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L30 ANSWER 11 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
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AN 2004:1154715 CAPLUS Full-text

DN 142:93845

- TI Method for producing triazolopyrimidines for use in controlling undesirable microorganisms
- IN Gebauer, Olaf; Guth, Oliver; Heinemann, Ulrich; Greul, Joerg Nico;
  Herrmann, Stefan; Gayer, Herbert; Elbe, Hans-Ludwig; Hillebrand, Stefan;
  Wachendorff-Neumann, Ulrike; Dahmen, Peter; Kuck, Karl-heinz
- PA Bayer Cropscience Aktiengesellschaft, Germany
- SO PCT Int. Appl., 73 pp. CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

| ran. |     | rent : | NO.  |      |     | KIN | D   | DATE |          |     | APPL     | ICAT | ION :    | NO.    |     | D.          | ATE  |     |
|------|-----|--------|------|------|-----|-----|-----|------|----------|-----|----------|------|----------|--------|-----|-------------|------|-----|
| ΡI   | WO  | 2004   | 1133 | 42   |     | A1  | _   | 2004 | <br>1229 |     | <br>WO 2 | 004- | <br>EP63 | <br>71 |     | 2           | 0040 | 614 |
|      |     | W:     | ΑE,  | AG,  | AL, | ΑM, | ΑT, | ΑU,  | ΑZ,      | BA, | BB,      | BG,  | BR,      | BW,    | BY, | BZ,         | CA,  | CH, |
|      |     |        | CN,  | CO,  | CR, | CU, | CZ, | DE,  | DK,      | DM, | DZ,      | EC,  | EE,      | EG,    | ES, | FΙ,         | GB,  | GD, |
|      |     |        | GE,  | GH,  | GM, | HR, | HU, | ID,  | IL,      | IN, | IS,      | JP,  | KΕ,      | KG,    | KP, | KR,         | KΖ,  | LC, |
|      |     |        | LK,  | LR,  | LS, | LT, | LU, | LV,  | MA,      | MD, | MG,      | MK,  | MN,      | MW,    | MX, | MZ,         | NA,  | NΙ, |
|      |     |        | NO,  | NZ,  | OM, | PG, | PH, | PL,  | PT,      | RO, | RU,      | SC,  | SD,      | SE,    | SG, | SK,         | SL,  | SY, |
|      |     |        |      |      |     |     |     | TZ,  |          |     |          |      |          |        |     |             |      |     |
|      |     | RW:    | BW,  | GH,  | GM, | KE, | LS, | MW,  | MZ,      | NA, | SD,      | SL,  | SZ,      | TZ,    | UG, | ZM,         | ZW,  | AM, |
|      |     |        | ΑZ,  | BY,  | KG, | KΖ, | MD, | RU,  | ΤJ,      | TM, | ΑT,      | BE,  | ВG,      | CH,    | CY, | CZ,         | DE,  | DK, |
|      |     |        | EE,  | ES,  | FI, | FR, | GB, | GR,  | HU,      | IE, | ΙT,      | LU,  | MC,      | NL,    | PL, | PT,         | RO,  | SE, |
|      |     |        | SI,  | SK,  | TR, | BF, | ВJ, | CF,  | CG,      | CI, | CM,      | GΑ,  | GN,      | GQ,    | GW, | ${ m ML}$ , | MR,  | ΝE, |
|      |     |        | SN,  | TD,  | ΤG  |     |     |      |          |     |          |      |          |        |     |             |      |     |
|      | DE  | 1032   | 8481 |      |     | A1  |     | 2005 | 0113     |     | DE 2     | 003- | 1032     | 8481   |     | 2           | 0030 | 625 |
|      | ΕP  | 1644   | 374  |      |     | A1  |     | 2006 | 0412     |     | EP 2     | 004- | 7398     | 55     |     | 2           | 0040 | 614 |
|      |     | R:     | AT,  | BE,  | CH, | DE, | DK, | ES,  | FR,      | GB, | GR,      | ΙΤ,  | LI,      | LU,    | NL, | SE,         | MC,  | PT, |
|      |     |        | ΙE,  | SI,  | FΙ, | RO, | CY, | TR,  | ,        | ,   | ,        | •    | •        |        |     |             |      |     |
|      | CN  | 1812   | 991  |      |     | Α   |     | 2006 | 0802     |     | CN 2     | 004- | 8001     | 8042   |     | 2           | 0040 | 614 |
|      |     | 2004   |      |      |     |     |     | 2006 | 0829     |     |          |      |          |        |     |             | 0040 | 614 |
|      |     | 2007   |      |      |     |     |     | 2007 |          |     |          | 006- |          |        |     |             | 0040 |     |
|      |     | 2005   | _    |      |     |     |     | 2006 |          |     |          | 005- |          |        |     |             | 0051 | _   |
|      | ΙN  | 2005   | CN03 | 514  |     | Α   |     | 2007 | 0608     |     |          | 005- |          |        |     |             | 0051 |     |
|      | US  | 2007   | 1792 | 95   |     | A1  |     | 2007 | 0802     |     | US 2     | 006- | 5604     | 37     |     | 2           | 0060 | 512 |
| PRAI | DE  | 2003   | -103 | 2848 | 1   | Α   |     | 2003 | 0625     |     |          |      |          |        |     |             |      |     |
|      |     | 2004   |      |      |     | W   |     | 2004 | 0614     |     |          |      |          |        |     |             |      |     |
| OS   | MAI | RPAT   | 142: | 9384 | 5   |     |     |      |          |     |          |      |          |        |     |             |      |     |
| GI   |     |        |      |      |     |     |     |      |          |     |          |      |          |        |     |             |      |     |

## \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

The invention relates to novel triazolopyrimidines I [R1 = (un)substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocycle; R2 = H, alkyl; NR1R2 = heterocycle; R3 = halogen, (un)substituted alkyl, cycloalkyl; R4 = (un)substituted heterocycle; X = halogen], to a method for producing said substances and to their use for controlling undesirable microorganisms. The invention also relates to novel intermediate products of the formulas II, III, IV [R5 = C1-4-alkyl; R6 = halogen, haloalkyl] and V [R7 = halogen, haloalkyl; R8, R9 = H, F, C1, Br, Me, Et, OMe], in addition to methods for producing said substances. A procedure for the preparation of I is characterized by the reaction of dihalotriazolopyrimidines II (Y1 = halogen) with R1R2NH optionally in the presence of a solvent, acid acceptor and/or a catalyst; pyrimidines II are prepared from diols III; diols III are prepared from R4CH(CO2R5)2, e.g. IV

and V, via cyclocondensation with 3-amino-5-R3-1,2,4-triazoles; malonate IV is prepared from 3-R6-2-Y2-pyridine and CH2(CO2R5)2; malonate V is prepared from pyrimidine VI (Y3 = halogen) and CH2(CO2R5)2. Thus, triazolopyrimidine (S)-I [R1 = CHMeCF3-(S), R2 = H, R3 = Me, R4 = 3-(triflouromethyl)pyridin- 2-yl, X = Me, R4 =C1] was prepared from II [R2 = H, R3 = Me, R4 = 3-(triflouromethyl)pyridin-2yl, X = Y1 = Cl] via regioselective amination with NHCHMeCF3-(S) in MeCN containing KF. Dichlorotriazolopyrimidine II [R2 = H, R3 = Me, R4 = 3-(triflouromethyl)pyridin-2-yl, X = Y1 = C1] was prepared from 2-chloro-3-(trifluoromethyl)pyridine via sequential arylation of CH2(CO2Me)2 in dioxane containing NaH and catalytic CuCl, cyclocondensation of the resulting heterocyclylmalonate IV [R5 = Me, R6 = CF3] with 3-amino-5-cyclopropyl-1,2,4triazole in the presence Bu3N and chlorination of the triazolopyrimidinediol III [R3 = Me, R4 = 3- (triflouromethyl)pyridin-2-yl] with POCl3. The antimicrobial activities of I were determined {over 90% inhibition vs. Podosphaera leucotricha at 100 g/ha, over 90% inhibition vs. Sphaerotheca fuliginea at 750 g/ha and over 85% inhibition vs. Erysiphe graminis at 500 g/ha for (S)-I [R1 = CHMeCF3-(S), R2 = H, R3 = Me, R4 = 3-(triflouromethyl)pyridin-4-yl, X = Cl; over 90% inhibition vs. Podosphaera leucotricha, Uncinula necator and Venturia inaequalis at 100 g/ha for (S)-I [R1 = CHMeCF3-(S), R2 = H, R3 = cyclopropyl, R4 = 5-chloropyrimidin-4-yl, X = Cl]}.

IT 809276-86-6P 809276-87-7P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and cyclocondensation of, with aminotrizole derivative; preparation of

triazolopyrimidines for use in controlling pathogenic microorganisms) RN 809276-86-6 CAPLUS

CN Propanedioic acid, [3-(trifluoromethyl)-2-pyridinyl]-, dimethyl ester (9CI) (CA INDEX NAME)

RN 809276-87-7 CAPLUS

CN Propanedioic acid, (5-chloro-4-pyrimidinyl)-, dimethyl ester (9CI) (CA INDEX NAME)

- L30 ANSWER 12 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2004:1154714 CAPLUS Full-text
- DN 142:93844
- TI Method for producing triazolopyrimidines and to their use for controlling undesirable microorganisms
- IN Gebauer, Olaf; Heinemann, Ulrich; Greul, Joerg Nico; Herrmann, Stefan; Guth, Oliver; Elbe, Hans-Ludwig; Gayer, Herbert; Hillebrand, Stefan; Wachendorff-Neumann, Ulrike; Kuck, Karl-Heinz; Dahmen, Peter
- PA Bayer Cropscience Aktiengesellschaft, Germany
- SO PCT Int. Appl., 55 pp.

CODEN: PIXXD2

- DT Patent
- LA German

FAN.CNT 1

| FAN. |     | 1<br>FENT : | NO.  |      |     | KIN: |     | DATE |      |     | APPL | ICAT | ION I | NO.  |     | D.              | ATE  |     |
|------|-----|-------------|------|------|-----|------|-----|------|------|-----|------|------|-------|------|-----|-----------------|------|-----|
| ΡI   | WO  | 2004        | 1133 | 41   |     |      |     | 2004 | 1229 | ,   | WO 2 | 004- | EP63  | 69   |     | 2               | 0040 | 614 |
|      | WO  | 2004        | 1133 | 41   |     | А3   |     | 2005 | 0512 |     |      |      |       |      |     |                 |      |     |
|      |     | W:          | ΑE,  | ΑG,  | AL, | AM,  | ΑT, | ΑU,  | ΑZ,  | BA, | BB,  | BG,  | BR,   | BW,  | BY, | BZ,             | CA,  | CH, |
|      |     |             | CN,  | CO,  | CR, | CU,  | CZ, | DE,  | DK,  | DM, | DZ,  | EC,  | EE,   | EG,  | ES, | FI,             | GB,  | GD, |
|      |     |             | GE,  | GH,  | GM, | HR,  | HU, | ID,  | IL,  | IN, | IS,  | JP,  | ΚE,   | KG,  | KP, | KR,             | KΖ,  | LC, |
|      |     |             | LK,  | LR,  | LS, | LT,  | LU, | LV,  | MA,  | MD, | MG,  | MK,  | MN,   | MW,  | MX, | MZ,             | NA,  | NI, |
|      |     |             | NO,  | NΖ,  | OM, | PG,  | PH, | PL,  | PT,  | RO, | RU,  | SC,  | SD,   | SE,  | SG, | SK,             | SL,  | SY, |
|      |     |             | ТJ,  | TM,  | TN, | TR,  | TΤ, | TZ,  | UA,  | UG, | US,  | UZ,  | VC,   | VN,  | YU, | ZA,             | ZM,  | ZW  |
|      |     | RW:         | BW,  | GH,  | GM, | KE,  | LS, | MW,  | MZ,  | NA, | SD,  | SL,  | SZ,   | TZ,  | UG, | ZM,             | ZW,  | AM, |
|      |     |             | ΑZ,  | BY,  | KG, | KΖ,  | MD, | RU,  | ΤJ,  | TM, | ΑT,  | BE,  | BG,   | CH,  | CY, | CZ,             | DE,  | DK, |
|      |     |             | EE,  | ES,  | FI, | FR,  | GB, | GR,  | HU,  | IE, | ΙT,  | LU,  | MC,   | NL,  | PL, | PT,             | RO,  | SE, |
|      |     |             | SI,  | SK,  | TR, | BF,  | ΒJ, | CF,  | CG,  | CI, | CM,  | GA,  | GN,   | GQ,  | GW, | $\mathrm{ML}$ , | MR,  | ΝE, |
|      |     |             | SN,  | TD,  | ΤG  |      |     |      |      |     |      |      |       |      |     |                 |      |     |
|      | DE  | 1032        | 8173 |      |     | A1   |     | 2005 | 0113 |     | DE 2 | 003- | 1032  | 8173 |     | 2               | 0030 | 624 |
|      | ΕP  | 1638        | 974  |      |     | A2   |     | 2006 | 0329 |     | EP 2 | 004- | 7398  | 53   |     | 2               | 0040 | 614 |
|      |     | R:          | ΑT,  | BE,  | CH, | DE,  | DK, | ES,  | FR,  | GB, | GR,  | ΙΤ,  | LI,   | LU,  | NL, | SE,             | MC,  | PT, |
|      |     |             | •    | •    |     | ,    | ,   | TR,  | ,    | ,   | ,    | ,    | ,     |      |     |                 |      |     |
|      |     | 1809        |      |      |     | А    |     | 2006 |      |     |      |      |       |      |     |                 |      |     |
|      |     | 2004        |      |      |     |      |     |      |      |     |      |      |       |      |     |                 |      |     |
|      |     | 2007        |      |      |     |      |     | 2007 |      |     |      |      |       |      |     |                 | 0040 |     |
|      |     | 2005        |      |      |     |      |     | 2006 |      |     |      |      |       |      |     |                 | 0051 |     |
|      |     | 2006        |      |      |     |      |     |      |      |     | US 2 | 006- | 5611  | 74   |     | 2               | 0060 | 606 |
| PRAI |     | 2003        |      |      |     | A    |     | 2003 |      |     |      |      |       |      |     |                 |      |     |
|      |     | 2004        |      |      |     | W    |     | 2004 | 0614 |     |      |      |       |      |     |                 |      |     |
| OS   | MAI | RPAT        | 142: | 9384 | 4   |      |     |      |      |     |      |      |       |      |     |                 |      |     |
| GI   |     |             |      |      |     |      |     |      |      |     |      |      |       |      |     |                 |      |     |

## \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

The invention relates to novel triazolopyrimidines I [R1 = (un)substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl; R2 = H, halogen, (un)substituted alkyl, cycloalkyl; R3 = (un)substituted heteroalkyl; G = SOn; X = halogen, CN, (un)substituted alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl; n = 0 - 2], to a method for producing said substances and to their use for controlling undesirable microorganisms. The procedure for the preparation of I is characterized by the reaction of dihalotriazolopyrimidines II (X1, Y1 = halogen) with R1GH to give I (X = X1) which is further reacted with (i) R4-M [R4 = (un)substituted alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, CN; M = Na, K]; or (ii) R5Mg-Hal [R5 = (un)substituted alkyl; Hal = Cl, Br] in a dilute medium. The invention also relates to novel

intermediate products of the formulas III, IV (R6 = C1-4-alkyl; R7 = alkyl, haloalkyl) and V (R8 = halo, haloalkyl; R9, R10 = H, F, C1, Br, Me, Et, OMe) , in addition to methods for producing said substances. Thus, triazolopyrimidine I (R1 = CHMeCHMe2, R2 = H, R3 = 4-chloro-3-pyrimidinyl, G = S, X = C1) was prepared from dihalotriazolopyrimidine II (R2 = H, R3 = 4-chloro-3-pyrimidinyl, X1 = Y1 = C1) via reaction with Me2CHCHMeSH in MeCN containing KF and K2CO3. The antimicrobial activity of I (R1 = CHMeCHMe2, R2 = H, R3 = 4-chloro-3-pyrimidinyl, G = S, X = C1) was determined [100% inhibition vs. Podosphaera leucotricha at 100g/ha; 90% inhibition vs. Venturia inaequalis at 100g/ha; ED50 = 10 ppm vs. Botrytis cinerea].

IT 809276-86-6P, Dimethyl 2-[3-(trifluoromethyl)pyridin-2-yl]malonate 809276-87-7P, Dimethyl 2-(5-chloropyrimidin-4-yl)malonate RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and cyclocondensation of, with 3-amino-1,2,4-triazole derivs.; preparation of triazolopyrimidines for use in controlling pathogenic microorganisms)

RN 809276-86-6 CAPLUS

CN Propanedioic acid, [3-(trifluoromethyl)-2-pyridinyl]-, dimethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \circ \\ & & & & \\$$

RN 809276-87-7 CAPLUS

CN Propanedioic acid, (5-chloro-4-pyrimidinyl)-, dimethyl ester (9CI) (CA INDEX NAME)

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ANSWER 13 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
L30
    2004:1154559 CAPLUS Full-text
ΑN
DN
    142:70279
    Preparation of triazolopyrimidine derivatives as fungicides
ΤI
    Gebauer, Olaf; Heinemann, Ulrich; Greul, Joerg Nico; Herrmann, Stefan;
ΙN
    Guth, Oliver; Gayer, Herbert; Elbe, Hans-Ludwig; Hillebrand, Stefan;
    Ebbert, Ronald; Wachendorff-Neumann, Ulrike; Kuck, Karl-heinz
    Bayer Cropscience Aktiengesellschaft, Germany; et al.
PA
    PCT Int. Appl., 65 pp.
SO
    CODEN: PIXXD2
DT
    Patent
LA
    German
FAN.CNT 1
    PATENT NO.
                       KIND
                              DATE
                                         APPLICATION NO.
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    WO 2004112480
                       A2
                              20041229
                                         WO 2004-EP6368
                                                                20040614
    WO 2004112480
                        А3
                              20050922
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
            TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
            EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
            SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
            SN, TD, TG
    DE 10328171
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                         Α1
                                                                20030624
    EP 1638400
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                                         EP 2004-736746
                                                                20040614
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,
    CN 1812717
                        Α
                              20060802
                                         CN 2004-80017907 20040614
    BR 2004011736
                        Α
                              20060829
                                         BR 2004-11736
                                                                20040614
                             20070322
                                        JP 2006-515916
    JP 2007506656
                        T
                                                                20040614
                             20060623
                                         MX 2005-PA13177
    MX 2005PA13177
                       A
                                                                20051206
                       A1 20070802
                                        US 2006-560438
    US 2007179162
                                                                20060425
                       A 20030624
W 20040614
PRAI DE 2003-10328171
    WO 2004-EP6368
OS
    MARPAT 142:70279
GΙ
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$$R^3$$
 $N$ 
 $N$ 
 $R^2$ 

AB The triazolopyrimidines I [R1 = (un)substituted alkyl, alkenyl, alkynyl, etc; R2 = H, halo, (un)substituted (cyclo)alkyl; R3 = (un)substituted heterocyclyl; X = halo, CN, (un)substituted alkyl, alkoxy, alkylthio, alkylsulfinyl or alkylsulfonyl] are prepd/ as fungicides.

IT 809276-86-6 809276-87-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactant in preparation of triazolopyrimidine derivative fungicide) RN 809276-86-6 CAPLUS

CN Propanedioic acid, [3-(trifluoromethyl)-2-pyridinyl]-, dimethyl ester (9CI) (CA INDEX NAME)

RN 809276-87-7 CAPLUS

CN Propanedioic acid, (5-chloro-4-pyrimidinyl)-, dimethyl ester (9CI) (CA INDEX NAME)

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L30 ANSWER 14 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
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AN 2004:1080907 CAPLUS Full-text

DN 142:56343

TI Preparation of triazolopyrimidines as microbicides

IN Gebauer, Olaf; Heinemann, Ulrich; Elbe, Hans-Ludwig; Gayer, Herbert;
Herrmann, Stefan; Greul, Joerg Nico; Krueger, Bernd-Wieland; Hillebrand,
Stefan; Ebbert, Ronald; Wachendorff-Neumann, Ulrike; Dahmen, Peter; Kuck,
Karl-Heinz

PA Bayer Cropscience Aktiengesellschaft, Germany

SO PCT Int. Appl., 63 pp. CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

| ran. |     | rent : | NO.  |      |     | KIN | D   | DATE |      |     | APPL     | ICAT | ION : | NO.  |     | D.          | ATE  |     |
|------|-----|--------|------|------|-----|-----|-----|------|------|-----|----------|------|-------|------|-----|-------------|------|-----|
| ΡI   | WO  | 2004   | 1087 | 27   |     | A1  | _   | 2004 | 1216 |     | <br>WO 2 | 004- | EP58  | 76   |     | 2           | 0040 | 601 |
|      |     | W:     | ΑE,  | AG,  | AL, | AM, | ΑT, | ΑU,  | AΖ,  | BA, | BB,      | BG,  | BR,   | BW,  | BY, | BZ,         | CA,  | CH, |
|      |     |        | CN,  | CO,  | CR, | CU, | CZ, | DE,  | DK,  | DM, | DZ,      | EC,  | EE,   | EG,  | ES, | FI,         | GB,  | GD, |
|      |     |        | GE,  | GH,  | GM, | HR, | ΗU, | ID,  | IL,  | IN, | IS,      | JP,  | KΕ,   | KG,  | KP, | KR,         | KΖ,  | LC, |
|      |     |        | LK,  | LR,  | LS, | LT, | LU, | LV,  | MA,  | MD, | MG,      | MK,  | MN,   | MW,  | MX, | MZ,         | NA,  | NΙ, |
|      |     |        | NO,  | NΖ,  | OM, | PG, | PH, | PL,  | PT,  | RO, | RU,      | SC,  | SD,   | SE,  | SG, | SK,         | SL,  | SY, |
|      |     |        | ТJ,  | TM,  | TN, | TR, | ΤT, | TZ,  | UA,  | UG, | US,      | UZ,  | VC,   | VN,  | YU, | ZA,         | ZM,  | ZW  |
|      |     | RW:    | BW,  | GH,  | GM, | KE, | LS, | MW,  | MZ,  | NA, | SD,      | SL,  | SZ,   | TZ,  | UG, | ZM,         | ZW,  | AM, |
|      |     |        | ΑZ,  | BY,  | KG, | KΖ, | MD, | RU,  | ΤJ,  | TM, | ΑT,      | BE,  | BG,   | CH,  | CY, | CZ,         | DE,  | DK, |
|      |     |        | EE,  | ES,  | FI, | FR, | GB, | GR,  | HU,  | IE, | ΙΤ,      | LU,  | MC,   | NL,  | PL, | PT,         | RO,  | SE, |
|      |     |        | SI,  | SK,  | TR, | BF, | ВJ, | CF,  | CG,  | CI, | CM,      | GΑ,  | GN,   | GQ,  | GW, | ${ m ML}$ , | MR,  | ΝE, |
|      |     |        | SN,  | TD,  | ΤG  |     |     |      |      |     |          |      |       |      |     |             |      |     |
|      | DE  | 1032   | 5133 |      |     | A1  |     | 2004 | 1223 |     | DE 2     | 003- | 1032  | 5133 |     | 2           | 0030 | 604 |
|      | ΕP  | 1641   | 798  |      |     | A1  |     | 2006 | 0405 |     | EP 2     | 004- | 7355  | 70   |     | 2           | 0040 | 601 |
|      |     | R:     | AT,  | BE,  | CH, | DE, | DK, | ES,  | FR,  | GB, | GR,      | ΙT,  | LI,   | LU,  | NL, | SE,         | MC,  | PT, |
|      |     |        | ΙE,  | SI,  | FΙ, | RO, | CY, | TR,  | BG,  | CZ, | EE,      | HU,  | PL,   | SK   |     |             |      |     |
|      | BR  | 2004   | 0109 | 06   |     | A   |     | 2006 | 0627 |     | BR 2     | 004- | 1090  | 6    |     | 2           | 0040 | 601 |
|      |     | 1802   |      |      |     |     |     | 2006 | 0712 |     | CN 2     | 004- | 8001  | 5481 |     | 2           | 0040 | 601 |
|      | JP  | 2006   | 5265 | 87   |     | Τ   |     | 2006 | 1124 |     | JP 2     | 006- | 5082  | 37   |     | 2           | 0040 | 601 |
|      | ΙN  | 2005   | DN05 | 123  |     | Α   |     | 2007 | 0817 |     | IN 2     | 005- | DN51  | 23   |     | 2           | 0051 | 108 |
|      | MX  | 2005   | PA12 | 951  |     | Α   |     | 2006 | 0213 |     | MX 2     | 005- | PA12  | 951  |     | 2           | 0051 | 130 |
|      | US  | 2007   | 2759 | 85   |     | A1  |     | 2007 | 1129 |     | US 2     | 007- | 5591  | 02   |     | 2           | 0070 | 322 |
| PRAI | DE  | 2003   | -103 | 2513 | 3   | А   |     | 2003 | 0604 |     |          |      |       |      |     |             |      |     |
|      |     | 2004   |      |      |     | W   |     | 2004 | 0601 |     |          |      |       |      |     |             |      |     |
| OS   | MAI | RPAT   | 142: | 5634 | 3   |     |     |      |      |     |          |      |       |      |     |             |      |     |
| GI   |     |        |      |      |     |     |     |      |      |     |          |      |       |      |     |             |      |     |

AB Title compds. [I; R1 = (substituted) alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl; R2 = H, alkyl; R1R2N = (substituted) heterocyclyl; R3 =

(substituted) pyridyl, pyrimidinyl; X = halo], were prepared Thus, 5,7-dichloro-6-(3-trifluoromethylpyridin-2-yl)-[1,2,4]-triazolo[1,5-a]pyrimidine (preparation given) was stirred 2 h at 80° with KF in MeCN; the mixture was cooled to 0° and (S)-2,2,2-trifluoroisopropylamine was added followed by stirring at 80° for 18 h to give 60.4% title compound (II). II and other I at 100 g/ha gave  $\geq$ 90% protection against Podosphaera leucotricha on apples. 809276-86-6F 809276-87-7F

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of triazolopyrimidines as microbicides)

RN 809276-86-6 CAPLUS

CN Propanedioic acid, [3-(trifluoromethyl)-2-pyridinyl]-, dimethyl ester (9CI) (CA INDEX NAME)

RN 809276-87-7 CAPLUS

CN Propanedioic acid, (5-chloro-4-pyrimidinyl)-, dimethyl ester (9CI) (CA INDEX NAME)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 15 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:753404 CAPLUS Full-text

DN 141:277626

TI Preparation of oxadiazole derivatives as elastase inhibitors

IN Torisu, Kazuhiko; Kobayashi, Kaoru; Naganawa, Atsushi; Sekioka, Tomohiko; Kawabata, Kazuhito

PA Ono Pharmaceutical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 207 pp. CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
|      |                   |      |          |                 |          |
| ΡI   | JP 2004256473     | A    | 20040916 | JP 2003-50563   | 20030227 |
| PRAI | JP 2003-50563     |      | 20030227 |                 |          |
| OS   | MARPAT 141:277626 |      |          |                 |          |
| GI   |                   |      |          |                 |          |

AB Title compds. I [R1 = monocyclic carbocycle, etc.; R2 = COR12, etc.; R12 = alkyl, etc.] were prepared For example, oxidation of compound II [X = CH(OH)], e.g., prepared from 2-chloro-5-(trifluoromethyl)pyridine in 7 steps, using Dess-Martin reagent gave compound II [X = CO]. In elastase inhibition assays, the IC50 values of compds. I were  $\leq$ 10  $\mu$ M. Compds. I are claimed useful for the treatment of chronic articular rheumatism, myocardial infarction, etc. Formulations are given.

IT 153704-26-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of oxadiazole derivs. as elastase inhibitors for treatment of chronic articular rheumatism and myocardial infarction)

RN 153704-26-8 CAPLUS

CN Propanedioic acid, [5-(trifluoromethyl)-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

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L30 ANSWER 16 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
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AN 2004:101166 CAPLUS Full-text

DN 140:146163

TI Preparation of triazolopyrimidine derivatives as fungicides

IN Masumizu, Tatsuya; Tajino, Hidehiro; Murakami, Hideyuki; Watanabe, Masaru;
Wakabayashi, Hitoshi; Hiramatsu, Motohiro; Tahara, Tomomi

PA Hokko Chemical Industry Co., Ltd., Japan

SO PCT Int. Appl., 114 pp. CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

GΙ

|      | PATENT NO.        | KIND   | DATE         | APPLICATION NO.       | DATE        |  |  |
|------|-------------------|--------|--------------|-----------------------|-------------|--|--|
|      |                   |        |              |                       |             |  |  |
| ΡI   | WO 2004011467     | A1     | 20040205     | WO 2003-JP9615        | 20030729    |  |  |
|      | W: JP, US         |        |              |                       |             |  |  |
|      | RW: AT, BE, BG,   | CH, CY | , CZ, DE, DK | , EE, ES, FI, FR, GB, | GR, HU, IE, |  |  |
|      | IT, LU, MC,       | NL, PT | , RO, SE, SI | , SK, TR              |             |  |  |
| PRAI | JP 2002-219751    | A      | 20020729     |                       |             |  |  |
|      | JP 2002-229836    | A      | 20020807     |                       |             |  |  |
|      | JP 2002-249906    | A      | 20020829     |                       |             |  |  |
| OS   | MARPAT 140:146163 |        |              |                       |             |  |  |

The title compds. I [wherein HetA = (un)substituted heterocyclyl; XA = halo, CN, alkoxy, alkylthio, alkyl-SO-, alkyl-SO2-, alkylamino, or alkoxycarbonyl; RA and RA' = independently (un)substituted alkyl, alkenyl, alkynyl, or Ph], II [wherein HetB = (un)substituted heterocyclyl; XB = halo, CN, alkoxy, alkylthio, alkyl-SO-, alkyl-SO2-, alkylamino, or alkoxycarbonyl; RB = (un)substituted heterocyclyl], and III [wherein HetC = (un)substituted heterocyclyl; XC = halo, CN, alkoxy, or alkylthio; RC = alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, or (un)substituted aralkyl] are prepared as fungicides for agricultural and horticultural use. For example, the compound IV was prepared in a multi-step synthesis. I-III showed significant antifungal effect against pyricularia oryzae.

IT 653584-05-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of triazolopyrimidine derivs. as fungicides)

RN 653584-05-5 CAPLUS

CN Propanedioic acid, (5-chloro-2-methyl-4-pyrimidinyl)-, diethyl ester (9CI) (CA INDEX NAME)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 17 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2001:746701 CAPLUS Full-text

DN 136:247470

TI Polyhalogenated heterocyclic compounds. Part 45. Reactions of perfluoro-(4-isopropylpyridine) with oxygen, nitrogen and carbon nucleophiles

AU Chambers, R. D.; Hassan, M. A.; Hoskin, P. R.; Kenwright, A.; Richmond, P.; Sandford, G.

CS Department of Chemistry, University of Durham, Durham, DH1 3LE, UK

SO Journal of Fluorine Chemistry (2001), 111(2), 135-146 CODEN: JFLCAR; ISSN: 0022-1139

PB Elsevier Science S.A.

DT Journal

LA English

OS CASREACT 136:247470

AB Reactions between perfluoro-(4-isopropylpyridine) and a variety of oxygen-, nitrogen- and carbon-centered nucleophiles are reported. A range of mono-, di- and tri-substituted perfluoro-(4-isopropylpyridine) derivs. were synthesized for which yields and regiochem. depended on reaction conditions. The barriers to rotation for the perfluoro-iso-Pr group in several pyridine systems were measured by 19F NMR spin-saturation transfer expts.

IT 403981-23-7P

RL: SPN (Synthetic preparation); PREP (Preparation) (nucleophilic substitution of perfluoro(isopropylpyridine) with oxygen, nitrogen, and carbon nucleophiles and study of rotational barriers by 19F NMR)

RN 403981-23-7 CAPLUS

CN Propanedioic acid, [3,5,6-trifluoro-4-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

$$F_{3}C- \overbrace{\bigcup_{CF_{3}}^{F}}^{F} \overbrace{\bigcup_{C-OEt}^{N}}^{N} \underbrace{\bigcup_{C-OEt}^{O}}_{C}$$

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L30
    ANSWER 18 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN
ΑN
    2001:136943 CAPLUS Full-text
DN
    134:174246
    Preparation of pyridine derivative fungicides
ΤI
    Cooke, Tracey; Hardy, David; Moloney, Brian; Thomas, Peter Stanley;
IN
    Steele, Chris Richard; Briggs, Geoffrey Gower
PΑ
    Aventis CropScience GmbH, Germany
SO
    PCT Int. Appl., 56 pp.
    CODEN: PIXXD2
DT
    Patent
    English
LA
FAN.CNT 1
                      KIND DATE
    PATENT NO.
                                    APPLICATION NO. DATE
                            _____
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                                         _____
    _____
    WO 2001011965
                       A1 20010222 WO 2000-EP8143
                                                              20000809
РΤ
        W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR,
            CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID,
            IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
            MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE,
            SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
            CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                       BR 2000-13371
    BR 2000013371
                            20020507
                                                               20000809
                        Α
    EP 1204323
                                        EP 2000-960499
                              20020515
                                                               20000809
                        Α1
    EP 1204323
                        В1
                              20040714
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL
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20030218

20040715

20041130

20041216

20050318

20030128

19990818

20000809

B1 20041123

A 19990818

JP 2001-516328

AT 2000-960499

PT 2000-960499

ES 2000-960499

IN 2002-MN92

MX 2002-PA1453 US 2002-49976

20000809

20000809

20000809

20000809

20020125

20020211

20020709

T

Т

T3 A

Τ

Α

A

A

W

MARPAT 134:174246 OS

JP 2003506465

IN 2002MN00092

US 6821992

GB 1999-19500

WO 2000-EP8143

MX 2002PA01453

AT 270817

PT 1204323

ES 2220533

PRAI GB 1999-19499

The pyridine derivs. A1CR1R2LA2 [A1 = (un)substituted 2-pyridyl or its N-AΒ oxide; Y = LA2 or L1A3; A2, A3 = (un)substituted carbocyclyl or heterocyclyl; L = NR5C(:X)NR6, NR5C(:X)CHR3, CHR3NR5CHR4, etc.; L1 = NR9C(:X)X1CHR7, NR9C(:X)CHR7CHR8, etc.; R1-9 = CN, NO2, halo, etc.] are prepared as agrochem. fungicides.

TΤ 172527-71-8P

> RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(intermediate in preparation of pyridine derivative fungicide)

RN 172527-71-8 CAPLUS

Propanedioic acid, [3-chloro-5-(trifluoromethyl)-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

L30 ANSWER 19 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2000:818526 CAPLUS Full-text

DN 134:115916

TI Process Development of Voriconazole: A Novel Broad-Spectrum Triazole Antifungal Agent

AU Butters, Mike; Ebbs, Julie; Green, Stuart P.; MacRae, Julie; Morland, Matthew C.; Murtiashaw, Charles W.; Pettman, Alan J.

CS Department of Process Research and Development, Pfizer Central Research, Sandwich Kent, CT13 9NJ, UK

Organic Process Research & Development (2001), 5(1), 28-36 CODEN: OPRDFK; ISSN: 1083-6160

PB American Chemical Society

DT Journal

LA English

OS CASREACT 134:115916

In the synthesis of (2R,3S)-2-(2,4-difluorophenyl)-3-(5-fluoro-4-pyrimidinyl)-1-(1H-1,2,4-triazol-1-yl)-2-butanol (voriconazole), the relative stereochem. is set in the addition of a 4-(1-metalloethyl)-5- fluoropyrimidine derivative to 1-(2,4-difluorophenyl)-2-(1H-1,2,4-triazol-1-yl)-1-ethanone. The diastereocontrol of this reaction has been examined by variation of pyrimidine substitution pattern and by changes in the metalation and reaction conditions. Excellent diastereoselection (12:1) is obtained using an organozinc derivative of 6-(1-bromoethyl)-4-chloro-5- fluoropyrimidine. After removal of the chlorine from the pyrimidine ring, the absolute stereochem. of voriconazole is established via a diastereomeric salt resolution process using (1R)-10-camphorsulfonic acid. Synthetic routes to the pyrimidine partner have also been evaluated. The initial six-step development route from 5-fluorouracil has been superseded by a four-step synthesis involving fluorination of Me 3-oxopentanoate and cyclization with formamidine acetate.

IT 137234-89-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of voriconazole)

RN 137234-89-0 CAPLUS

CN Propanedioic acid, (2-chloro-5-fluoro-4-pyrimidinyl)methyl-, diethyl ester (9CI) (CA INDEX NAME)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 20 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1995:995031 CAPLUS Full-text

DN 124:86998

TI 2-Cyano-1,3-dione derivatives useful as herbicides

PA Rhone-Poulenc Agriculture Ltd., UK

SO PCT Int. Appl., 47 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| 1 7111 • ( | PATENT NO. |        |         | KIND DATE |      | APPLICATION NO. |     |      |       |     | DATE |           |          |     |     |     |           |     |
|------------|------------|--------|---------|-----------|------|-----------------|-----|------|-------|-----|------|-----------|----------|-----|-----|-----|-----------|-----|
| ΡI         | WO         | 9525   | <br>099 |           |      | A1              | _   | 1995 | 0921  |     | WO 1 | <br>995-: | <br>EP95 | 0   |     | 1   | <br>9950: | 314 |
|            |            | W:     | AM,     | ΑU,       | BB,  | BG,             | BR, | BY,  | CA,   | CN, | CZ,  | EE,       | FI,      | GE, | HU, | KG, | KP,       | KR, |
|            |            |        | KΖ,     | LK,       | LR,  | LT,             | LV, | MD,  | MG,   | MN, | MX,  | NO,       | NZ,      | PL, | RO, | RU, | SG,       | SI, |
|            |            |        | SK,     | ТJ,       | TT,  | UA,             | UG, | US,  | UZ,   | VN  |      |           |          |     |     |     |           |     |
|            |            | RW:    | KE,     | MW,       | SD,  | SZ,             | UG, | ΑT,  | BE,   | CH, | DE,  | DK,       | ES,      | FR, | GB, | GR, | IE,       | ΙΤ, |
|            |            |        | LU,     | MC,       | NL,  | PT,             | SE, | BF,  | ВJ,   | CF, | CG,  | CI,       | CM,      | GA, | GN, | ML, | MR,       | ΝE, |
|            |            |        | SN,     | TD,       | ΤG   |                 |     |      |       |     |      |           |          |     |     |     |           |     |
|            | AU         | 9518   | 942     |           |      | Α               |     | 1995 | 1003  |     | AU 1 | 995-      | 1894     | 2   |     | 1   | 9950      | 314 |
| PRAI       | GB         | 1994   | -522    | 9         |      | Α               |     | 1994 | 0317  |     |      |           |          |     |     |     |           |     |
|            | WO         | 1995   | EP9     | 50        |      | W               |     | 1995 | 0314  |     |      |           |          |     |     |     |           |     |
|            | CAS        | SREAC' | Т 12    | 4:86      | 998; | MAR:            | PAT | 124: | 86998 | 3   |      |           |          |     |     |     |           |     |
| GΙ         |            |        |         |           |      |                 |     |      |       |     |      |           |          |     |     |     |           |     |

AB The invention relates to 2-cyano-1,3-dione derivs. R1COCH(CN)COAr [I; Ar = certain (un)substituted monocyclic or fused bicyclic heterocyclic systems; R1 = (un)substituted C3-6 cycloalkyl] and their use as herbicides. Fifteen I and over 50 intermediates were prepared For example, ring cleavage of 4-(4-chloro-3-methoxybenzo[b]thien-5-ylcarbonyl)-5- cyclopropylisoxazole [preparation given] by NaOMe in MeOH at room temperature gave title compound II. At 250 g/ha postemergence, II gave ≥ 90% control of Echinochloa crusgalli.

IT 172527-71-8P, Diethyl 2-(3-chloro-5-trifluoromethylpyridin-2-yl)malonate

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of cyano dione derivs. as herbicides)

RN 172527-71-8 CAPLUS

CN Propanedioic acid, [3-chloro-5-(trifluoromethyl)-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

L30 ANSWER 21 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1994:409389 CAPLUS Full-text

DN 121:9389

TI Preparation of isoxazoles derivatives and their use as herbicides

IN Cramp, Susan Mary; Smith, Philip Henry Gaunt

PA Rhone-Poulenc Agriculture Ltd., UK

SO Eur. Pat. Appl., 23 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

| FAN. | PA: | 1<br>TENT NO.                           |      |     |     |     |                |      | AP1   |        |       |     |     | D.  | ATE   |     |
|------|-----|---|------|-----|-----|-----|----------------|------|-------|--------|-------|-----|-----|-----|-------|-----|
| PI   | ΕP  | 588357<br>588357                        |      |     | A1  |     | 1994           | 0323 | EP    |        |       |     |     | 1   | 9930  | 917 |
|      |     | R: AT,                                  |      |     |     |     |                |      | CD CI | р тг   | тт    | тт  | ттт | NIT | рт    | CE  |
|      |     | 9346250                                 |      |     |     |     | , ES,<br>19940 |      |       | 1993-  |       |     |     |     |       |     |
|      | ווע | 666397                                  |      |     | B2  |     | 1996           |      |       | 1773   | 40230 |     |     |     | ,,,,, | 700 |
|      |     | 2105822                                 |      |     | A1  |     | 19940          |      |       | 1993-  | 21058 | 22  |     | 1   | 9930  | 909 |
|      |     | 2105822                                 |      |     |     |     | 20040          |      | CII   | 1000   | 21000 |     |     | _   | ,,,,, | 707 |
|      |     | 106997                                  |      |     |     |     | 1997           |      | TT.   | 1993-  | 10699 | 7   |     | 1   | 9930  | 913 |
|      |     | 9303517                                 |      |     |     |     | 1994           |      |       | 1993-  |       |     |     |     | 9930  |     |
|      |     | 9304089                                 |      |     | A   |     |                |      | FI    |        |       |     |     |     | 9930  |     |
|      |     |   |      |     | А   |     | 19940          |      |       | 1993-  |       |     |     |     | 9930  |     |
|      | CN  | 1085219                                 |      |     | A   |     | 19940          | 0413 |       | 1993-  |       |     |     |     | 9930  | 917 |
|      | CN  | 1045439                                 |      |     | В   |     | 1999:          | 1006 |       |        |       |     |     |     |       |     |
|      | JP  | 06192015                                |      |     |     |     | 19940          | 0712 | JP    | 1993-  | 23154 | 6   |     | 1   | 9930  | 917 |
|      | JP  | 3557230                                 |      |     | В2  |     | 20040          | 0825 |       |        |       |     |     |     |       |     |
|      | HU  | 68735                                   |      |     |     |     | 1995           | 728  | HU    | 1993-  | 2622  |     |     | 1   | 9930  | 917 |
|      | US  | 5480857                                 |      |     | Α   |     | 1996           | 0102 | US    | 1993-  | 12860 | 5   |     | 1   | 9930  | 917 |
|      |     | 2114842                                 |      |     |     |     | 1998           | 0710 | RU    | 1993-  | 52688 |     |     | 1   | 9930  | 917 |
|      | ΕP  | 1156048                                 |      |     | A1  |     | 2001           | 1121 | EP    | 2001-  | 11970 | 5   |     | 1   | 9930  | 917 |
|      |     | 1156048                                 |      |     | В1  |     | 2007           |      |       |        |       |     |     |     |       |     |
|      |     | R: AT,                                  | BE,  | CH, | DE, | DK. | , ES,          | FR,  | GB, G | R, IT, | LI,   | LU, | NL, | SE, | PT,   | IE  |
|      | ΑT  | 219079<br>2173877<br>369361<br>1992-197 |      |     | Τ   |     | 20020          | 0615 | AT    | 1993-  | 11498 | 9   |     | 1   | 9930  | 917 |
|      | ES  | 2173877                                 |      |     | Т3  |     | 2002           | 1101 | ES    | 1993-  | 11498 | 9   |     | 1   | 9930  | 917 |
|      | ΑT  | 369361                                  |      |     | Τ   |     | 20070          | 0815 | AT    | 2001-  | 11970 | 5   |     | 1   | 9930  | 917 |
| PRAI | GB  | 1992-197                                | 79   |     | A   |     | 1992           | 0918 |       |        |       |     |     |     |       |     |
|      |     | 1993-1149                               |      |     | А3  |     | 1993           | 0917 |       |        |       |     |     |     |       |     |
|      | MAI | RPAT 121:                               | 9389 |     |     |     |                |      |       |        |       |     |     |     |       |     |
| GI   |     |   |      |     |     |     |                |      |       |        |       |     |     |     |       |     |

AB Title compds. I (Ar = (substituted) heterocyclyl; R = H, R302C wherein R3 = (substituted) C1-6 alkyl; R1 = (halo) C1-6 alkyl, (substituted) C3-6 cycloalkyl)or a salt thereof, are prepared HONH2 and 3-cyclopropyl-1-(3,5-dichloropyridin-2-yl)-2-(dimethylamino)methylenepropane-1,3-dione (preparation given) in EtOH were stirred at room temperature overnight to give I (Ar = 3,5-dichloro-2-pyridyl, R = H, R1 = cyclopropyl) which with other 16 I when

applied pre- or post-emergence at  $4\ kg/ha$  or less, gave at leat 80% control of one or more weed species.

IT 155377-09-6P 155377-10-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn and reaction of, in preparation of herbicides)

RN 155377-09-6 CAPLUS

CN Propanedioic acid, [6-(trifluoromethyl)-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

RN 155377-10-9 CAPLUS

CN Propanedioic acid, [3-chloro-6-(trifluoromethyl)-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

L30 ANSWER 22 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1994:191483 CAPLUS Full-text

DN 120:191483

TI SRN1 reactions of chloro(trifluoromethyl)pyridines with naphtholate, phenolate and malonate anions

AU Beugelmans, Rene; Chastanet, Jacqueline

CS Inst. Chim. Subst. Nat., CNRS, Gif-sur-Yvette, 91198, Fr.

SO Tetrahedron (1993), 49(36), 7883-90 CODEN: TETRAB; ISSN: 0040-4020

DT Journal

LA English

2-Chloropyridines, bearing a CF3 group on position 3, 4, 5 or 6 (2-Cl Py CF3) are suitable substrates for photostimulated SRN1 reactions with nucleophiles derived from 2-naphthol (Nap-OH) or from phenol (PhOH). C-C coupling between the regiospecifically generated 2-pyridyl radical and the carbanionic site of the nucleophile yields 2-heretobiaryl derivs. (CF3Py-Nap-OH or CF3Py-PhOH). Similarly, coupling of the 2-amino-5-CF33-pyridyl radical yields 3-heterobiaryl derivs. Coupling of the malonate anion takes place with the aforementioned radicals.

IT 153704-26-8P 153704-27-9P 153704-28-0P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation in study of radical nucleophilic substitution of chloro(trifluoromethyl)pyridine with anions)

RN 153704-26-8 CAPLUS

CN Propanedioic acid, [5-(trifluoromethyl)-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

RN 153704-27-9 CAPLUS

CN Propanedioic acid, methyl[5-(trifluoromethyl)-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

RN 153704-28-0 CAPLUS

CN Propanedioic acid, methyl[6-(trifluoromethyl)-2-pyridinyl]-, diethyl ester (9CI) (CA INDEX NAME)

L30 ANSWER 23 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1991:656213 CAPLUS <u>Full-text</u>

DN 115:256213

- TI Preparation of 2-phenyl-3-(halopyridinyl)- or -pyrimidinyl)-1triazolylbutanols as medical fungicides
- IN Ray, Stephen James; Richardson, Kenneth
- PA Pfizer Ltd., UK; Pfizer Inc.

| SO   | Eur. Pat. Appl., 4 CODEN: EPXXDW | l pp.        |                      |   |          |
|------|----------------------------------|--------------|----------------------|---|----------|
| DT   | Patent                           |              |                      |   |          |
| LA   | English                          |              |                      |   |          |
|      | CNT 1                            |              |                      |   |          |
|      | PATENT NO.                       |              |                      | APPLICATION NO.                                   |          |
| PI   | EP 440372                        | A1           | 19910807             |   |          |
|      | EP 440372                        |              |                      |   |          |
|      | R: AT, BE, CH                    | DE, DK       | , ES, FR,            | GB, GR, IT, LI, LU, NL,                           | SE       |
|      | AT 90090                         | T<br>T3<br>A | 19930615             | AT 1991-300553<br>ES 1991-300553<br>IL 1991-97045 | 19910124 |
|      | ES 2055523                       | Т3           | 19940816<br>19951127 | ES 1991-300553                                    | 19910124 |
|      | IL 97045                         | A            | 19951127             | IL 1991-97045                                     | 19910125 |
|      | IN 176148                        | A1           | 19960210             | IN 1991-DE74                                      | 19910125 |
|      | IL 110322                        | A            | 19961031             |   |          |
|      | RO 109648                        |              |                      |   |          |
|      | CA 2035314                       | A1           | 19910803             |   | 19910130 |
|      | CA 2035314                       | C            | 20000118             |   |          |
|      | CA 2285891                       | C            | 20040106             |   |          |
|      | NO 9100368                       | A            | 19910805             | NO 1991-368                                       | 19910131 |
|      | NO 1/6/96                        | В            | 19950220             |   |          |
|      | NO 176796                        | С            | 19950531             |   |          |
|      | JP 04211078                      | A            | 19920803             |   |          |
|      | PL 169307                        | В1           | 19960628             |   |          |
|      | PL 169332                        | B1           | 19960731             |   |          |
|      | FI 9100508                       | А            | 19910803             |   | 19910201 |
|      | FI 107608                        | В1           | 20010914             |   |          |
|      | HU 56361                         | A2           | 19910828             | HU 1991-366                                       | 19910201 |
|      | HU 205351                        | В            | 19920428             |   |          |
|      | AU 9170223                       | A            | 19910905             | AU 1991-70223                                     | 19910201 |
|      | AU 625188                        | В2           | 19920702             |   |          |
|      | BR 9100435                       | A            | 19911022             |   |          |
|      | ZA 9100761                       | A            | 19920930             |   |          |
|      | CZ 279339                        | В6           | 19950412             |   | 19910201 |
|      | RU 2036194                       | C1           | 19950527             |   |          |
|      | SK 278215                        | В6           | 19960403             |   | 19910201 |
|      | RU 2114838                       | C1           | 19980710             | RU 1991-5010394                                   | 19910201 |
|      | CN 1053787                       | A            | 19910814             | CN 1991-100706                                    | 19910202 |
|      | CN 1026788                       | В            | 19941130             |   |          |
|      | US 5278175                       | A            |                      | US 1992-956569                                    |          |
|      | LV 10615                         | В            | 19951220             | LV 1993-1224                                      | 19931115 |
|      | CN 1100421                       | A            | 19950322             | CN 1994-102354                                    | 19940226 |
|      | CN 1040504                       | В            | 19981104             |   |          |
|      | US 5567817                       | A            | 19961022             | US 1995-432414                                    | 19950501 |
|      | US 5773443                       | A            | 19980630             | US 1996-683694                                    | 19960718 |
|      | JP 09208583                      | A            | 19970812             | JP 1996-190918                                    | 19960719 |
|      | JP 2848811                       | B2           | 19990120             | 1005  | 400-00-  |
|      | FI 9701238                       | A            | 19970325             | FI 1997-1238                                      | 19970325 |
|      | FI 2000000084                    | A            | 20000117             | FI 2000-84  | 20000117 |
| PRAI | GB 1990-2375                     | A            | 19900202             |   |          |
|      | EP 1991-300553                   | A            | 19910124             |   |          |
|      | IL 1991-97045                    | A3           | 19910125             |   |          |
|      | US 1991-646564                   | В1           | 19910125             |   |          |
|      |                                  |              |                      |   |          |

| CA  | 1991-2035314    | A3 | 19910130 |
|-----|-----------------|----|----------|
| JP  | 1991-31977      | А3 | 19910131 |
| FΙ  | 1991-508        | A  | 19910201 |
| US  | 1992-956569     | А3 | 19921005 |
| US  | 1993-139972     | В1 | 19931020 |
| US  | 1995-432414     | A1 | 19950501 |
| MAI | RPAT 115:256213 |    |          |

OS GI

The title compds [I; R = (un)substituted Ph; R1 = C1-4 alkyl; R2 = H, C1-4 alkyl; X = CH, N; Y = F, Cl] or their pharmaceutically acceptable salts, medical fungicides effective especially against Aspergillus ssp. fungi, were prepared, e.g., by condensation reaction of deprotonated Et (halo)pyridines with Ph triazolomethyl ketones. Thus, 4-ethyl-3-fluoropyridine was added dropwise at -70° to an in-situ prepd solution of (Me2CH)2NLi in THF, the mixture was stirred 15 min at that temperature, a solution of 1-(2,4-difluorophenyl)-2-(1H-1,2,4-triazol-1-yl)ethanone in THF was added, and the whole allowed to warm to room temperature over a 30-min period and the crude product chromatographed on silica to give title compound (I; R = 2,4-F2C6H3, R1 = Me, R2 = H, X = CH) (II; Y = F) as enantiomeric pairs A and B. The pair B in mice at 29 mg/kg twice a day for 5 days gave survival rate of 5 out of 5 test animals inoculated by Aspergillus fumigatus, vs. 4 out of 5 for a known structural analog (II; Y = H).

IT 137234-89-0P

RN

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, in preparation of medical fungicides) 137234-89-0 CAPLUS

CN Propanedioic acid, (2-chloro-5-fluoro-4-pyrimidinyl)methyl-, diethyl ester (9CI) (CA INDEX NAME)

L30 ANSWER 24 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1989:212625 CAPLUS Full-text

DN 110:212625

TI Preparation of 3-(pyridinylcarbonyl)-2,4-pyrandiones and their thia and aza analogs as herbicides

IN Grina, Jonas

PA Sandoz-Patent-G.m.b.H., Fed. Rep. Ger.

SO Ger. Offen., 8 pp. CODEN: GWXXBX

505211.

DT Patent

LA German

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
|      |               |      |          |                 |          |
| ΡI   | DE 3820538    | A1   | 19890105 | DE 1988-3820538 | 19880616 |
|      | AU 8818177    | A    | 19881222 | AU 1988-18177   | 19880620 |
|      | DK 8803365    | A    | 19881223 | DK 1988-3365    | 19880620 |
|      | FR 2616787    | A1   | 19881223 | FR 1988-8354    | 19880620 |
|      | GB 2206114    | A    | 19881229 | GB 1988-14614   | 19880620 |
|      | BR 8803033    | A    | 19890110 | BR 1988-3033    | 19880621 |
|      | NL 8801580    | A    | 19890116 | NL 1988-1580    | 19880621 |
|      | JP 01146881   | A    | 19890608 | JP 1988-154530  | 19880621 |
|      | ZA 8804459    | A    | 19900228 | ZA 1988-4459    | 19880622 |
| PRAI | GB 1987-14599 | A    | 19870622 |                 |          |
|      |               |      |          |                 |          |

OS MARPAT 110:212625

GI For diagram(s), see printed CA Issue.

The title compds. [I; A, B = H, C1-4 alkyl; AB = bond; R1 = substituted pyridinylcarbonyl; R2 = H, C1-4 alkyl, halo; R3 = H, C1-4 alkyl, (un)substituted Ph; if AB = bond, R2R3 may = CH:CHCH:CH; X = O, S, R4N; R4 = H, C1-4 alkyl(phenyl), Ph] and their corresponding enols II (R5 = H) were prepared as herbicides. A suspension of 2.40 g 4-hydroxy-6-methyl-2H- pyran-2-one and 4.00 g 3,5-dichloro-2-pyridinecarbonyl chloride [prepared in 4 steps starting with reaction of 3,5-dichloropyridine and CH2(CO2Et)2] in CH2C12 was stirred at room temperature while 1.8 mL Et3N was added dropwise. The mixture was stirred 6 h at room temperature and the intermediate ester was caused to rearrange by addition of Me2C(OH)CN and further Et3N and stirring overnight to give 1.28 g hydroxy(pyridinylcarbonyl)pyranone III. I and/or II showed herbicidal activity against several common weeds at 30-1000 g/ha.

IT 120569-92-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and decarboxylation of)

RN 120569-92-8 CAPLUS

CN Propanedioic acid, 2-(3,5-dichloro-2-pyridinyl)-, 1,3-diethyl ester (CA INDEX NAME)

L30 ANSWER 25 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1989:153667 CAPLUS Full-text

DN 110:153667

TI Tautomerism of azine dezivatives. XIII. Influence of inductive substituents on the position of tautomeric equilibrium of the azine-ylidene type

AU Petrenko, O. P.; Lopachev, V. V.; Mamaev, V. P.

CS Novosib. Inst. Org. Khim., Novosibirsk, USSR

SO Zhurnal Organicheskoi Khimii (1988), 24(9), 1793-9 CODEN: ZORKAE; ISSN: 0514-7492

DT Journal

LA Russian

OS CASREACT 110:153667

GΙ

AB The tautomerism of hydroxy, amino, mercapto, and substituted Me derivs. of pyridine and pyrimidine was studied theor. and exptl. Thus, the ratios of azinyl and azinylidene tautomers of pyrimidinylmalonates I (R = H, Me, CF3) were 3.74, 1.05, and >50, resp. The inductive substituents exerted the same type of effect on all the above functional groups.

IT 119884-64-9

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(tautomerism of)

RN 119884-64-9 CAPLUS

CN Propanedioic acid, [2-(trifluoromethyl)-4-pyrimidinyl]-, dimethyl ester (9CI) (CA INDEX NAME)

L30 ANSWER 26 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1983:487449 CAPLUS Full-text

DN 99:87449

OREF 99:13481a,13484a

TI Tautomerism of azine derivatives. VIII. Kinetics of tautomeric reactions of azinylmalonic esters

AU Petrenko, O. P.; Lapachev, V. V.; Mamaev, V. P.

CS Novosib. Inst. Org. Khim., Novosibirsk, USSR

SO Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Khimicheskikh Nauk (1983), (3), 87-92 CODEN: IZSKAB; ISSN: 0002-3426

DT Journal

LA Russian

GΙ

AB Rate consts. and activation parameters were determined for the forward and reverse processes in the tautomerization of I (R = H, Cl) and II (R = H, Cl). The autocatalysis observed, the high neg.  $\Delta S$ .thermod. values, and the solvent effect indicated an ionic mechanism.

IT 86761-89-9

RL: RCT (Reactant); RACT (Reactant or reagent)
 (tautomerization of, kinetics of)

RN 86761-89-9 CAPLUS

CN Propanedioic acid, (2-chloro-4-pyrimidinyl)-, dimethyl ester (9CI) (CA INDEX NAME)

L30 ANSWER 27 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1974:520400 CAPLUS Full-text

DN 81:120400

OREF 81:19027a,19030a

TI Reaction of pentachloropyridine with malonic ester

AU Moshchitskii, S. D.; Dubinskaya, E. S.; Pavlenko, A. F.

CS Inst. Org. Khim., Kiev, USSR

SO Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1974), 40(7), 744-7 CODEN: UKZHAU; ISSN: 0041-6045

DT Journal

LA Russian

GI For diagram(s), see printed CA Issue.

AB Reaction of pentachloropyridine with CH2(CO2Et)2 gave 72% the pyridinemalonic acid I and 18% di-Et 2,3,5,6-tetrachloropyridine-4- malonate.

Monodecarboxylation of I gave 90% the acid II (R = OH). II (R = OEt, Cl, NH2, NHPh) were also prepared Decarboxylation of II (R = OH) gave 95% 2- methyltetrachloropyridine, which was oxidized to give 38% tetrachloropicolinic acid. Heating (H2N)2CO with I gave 60% the barbituric acid III.

IT 51624-67-0P

RN 51624-67-0 CAPLUS

CN Propanedioic acid, (3,4,5,6-tetrachloro-2-pyridinyl)-, diethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} C1 \\ C1 \\ C1 \\ C1 \end{array}$$

L30 ANSWER 28 OF 28 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1974:95755 CAPLUS Full-text

DN 80:95755

OREF 80:15395a,15398a

TI Diethyl 2-(3,4,5,6-tetrachloropyridyl)malonate

IN Moshchitskii, S. D.; Dubrinskaya, E. S.; Pavlenko, A. F.; Ivashchenko, Ya. N.

PA Institute of Organic Chemistry, Academy of Sciences, Ukrainian S.S.R.

SO U.S.S.R.

From: Otkrytiya, Izobret., Prom. Tovarnye Znaki 1973, 50(47), 83. CODEN: URXXAF

DT Patent

LA Russian

FAN.CNT 1

|      | PATENT NO.      | KIND DATE |          | APPLICATION NO. | DATE     |  |  |
|------|-----------------|-----------|----------|-----------------|----------|--|--|
|      |                 |           |          |                 |          |  |  |
| ΡI   | SU 407902       | A1        | 19731210 | SU 1971-1715227 | 19711116 |  |  |
| PRAT | SU 1971-1715227 | А         | 19711116 |                 |          |  |  |

AB Di-Et 2-(3,4,5,6-tetrachloropyridyl) malonate was prepared by heating pentachloropyridine with sodiomalonic ester in dioxane.

IT 51624-67-0P

RN 51624-67-0 CAPLUS

CN Propanedioic acid, (3,4,5,6-tetrachloro-2-pyridinyl)-, diethyl ester (9CI) (CA INDEX NAME)

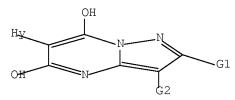
=> d 12; d 14; d 16; d 117; d his; log y L2 HAS NO ANSWERS L1 STR

$$H_{\underline{Y}}$$
 $X$ 
 $N$ 
 $G_2$ 

G1 H, Ak G2 CN, NO2, X, Cb, Ak, S, N

Structure attributes must be viewed using STN Express query preparation. L2 QUE ABB=ON PLU=ON L1

L4 HAS NO ANSWERS L3 STR



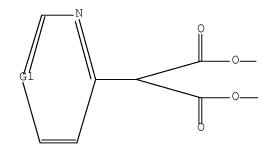
G1 H, Ak G2 CN, NO2, X, Cb, Ak, S, N

Structure attributes must be viewed using STN Express query preparation. L4  $$\tt QUE $\tt ABB=ON $\tt PLU=ON $\tt L3$$ 

L6 HAS NO ANSWERS L5 STR

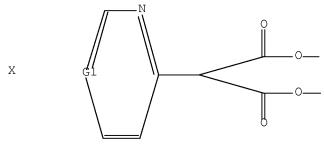
Х

G1 C,N



Structure attributes must be viewed using STN Express query preparation. L6 QUE ABB=ON PLU=ON L5

L17 HAS NO ANSWERS L16 STR



G1 C, N

Structure attributes must be viewed using STN Express query preparation. L17 QUE ABB=ON PLU=ON L16

## (FILE 'HOME' ENTERED AT 14:57:29 ON 29 FEB 2008)

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FILE 'REGISTRY' ENTERED AT 14:57:42 ON 29 FEB 2008
L1
                STRUCTURE UPLOADED
L2
                QUE L1
L3
                STRUCTURE UPLOADED
L4
                OUE L3
                STRUCTURE UPLOADED
L5
L6
               QUE L5
L7
              1 S L2
L8
              5 S L2 FUL
              0 S L4
L9
              2 S L4 FUL
L10
              6 S L6
L11
L12
            134 S L6 FUL
             7 S L8 OR L10
L13
     FILE 'CAPLUS' ENTERED AT 15:05:17 ON 29 FEB 2008
             2 S L13
L14
             94 S L12
L15
     FILE 'REGISTRY' ENTERED AT 15:06:50 ON 29 FEB 2008
L16
               STRUCTURE UPLOADED
                QUE L16
L17
              5 S L17 SAM SUB=L12
L18
L19
            106 S L17 FUL SUB=L12
L20
             71 S L19 AND 0-1/NR
L21
             61 S L20 AND 1-2/N
L22
             44 S L21 AND 4-5/0
     FILE 'CAPLUS' ENTERED AT 15:10:04 ON 29 FEB 2008
L23
             48 S L22
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L24
            7 S L23 AND AMINO?
L25
             6 S L23 AND CYAN?
L26
             37 S L23 NOT L24
L27
             38 S L23 NOT L25
L28
            13 S L24 OR L25
L29
             31 S L23 NOT L28
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## FILE 'CAPLUS' ENTERED AT 15:13:34 ON 29 FEB 2008 L30 28 S L29

| COST IN U.S. DOLLARS                       | SINCE FILE | TOTAL   |
|--|------------|---------|
|  | ENTRY      | SESSION |
| FULL ESTIMATED COST                        | 153.56     | 779.18  |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL   |
|  | ENTRY      | SESSION |
| CA SUBSCRIBER PRICE                        | -22.40     | -24.00  |

STN INTERNATIONAL LOGOFF AT 15:14:36 ON 29 FEB 2008